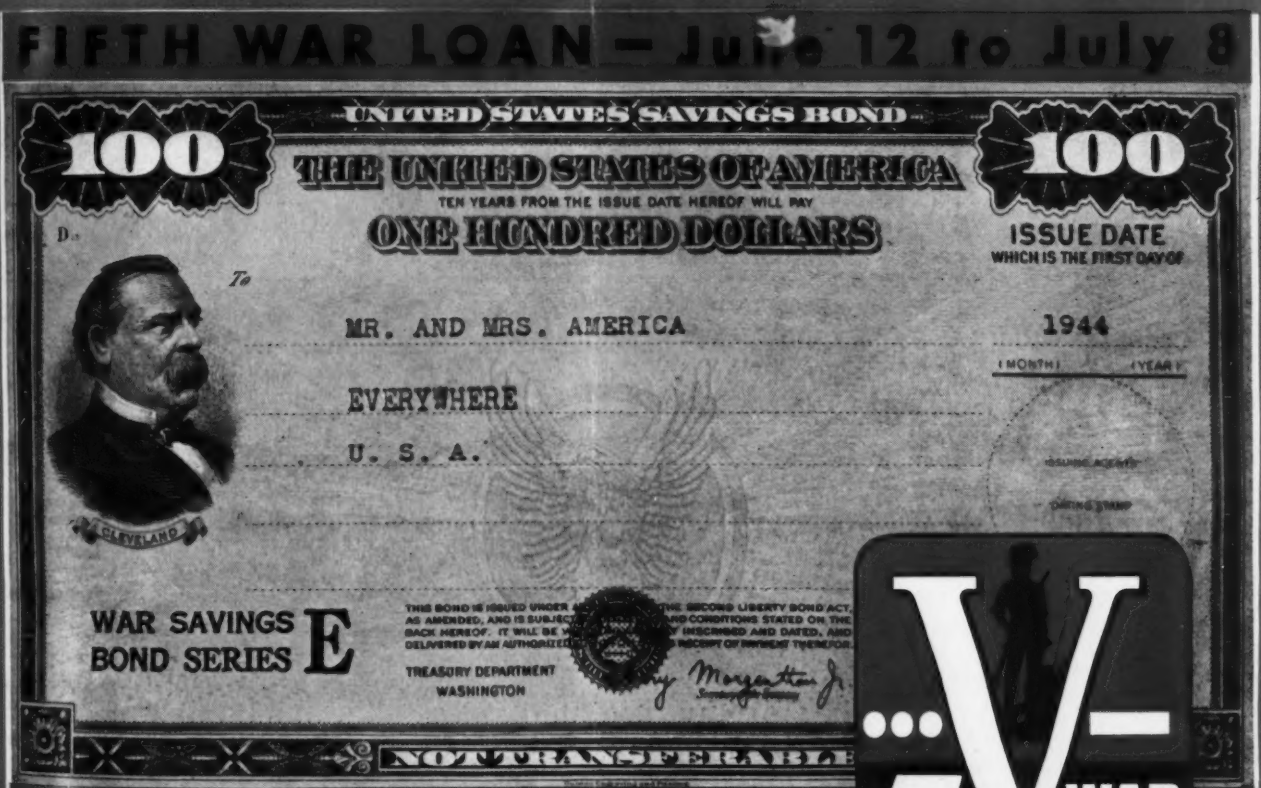
East Engin. Library

JUN 21 1944

PAPER TRADE JOURNAL

JUNE 15, 1944

FIFTH WAR LOAN — June 12 to July 8



...V— 5TH WAR LOAN

Back the Invasion
Buy More Bonds than
Before and Keep Them

ASTEN-HILL MFG. CO., PHILADELPHIA • ASTEN-HILL LTD., VALLEYFIELD, QUE.

DOWNINGTOWN • DOWNINGTOWN • DOWNINGTOWN • DOWNINGTOWN • DOWNINGTOWN • DOWNINGTOWN • DOWNINGTOWN

D

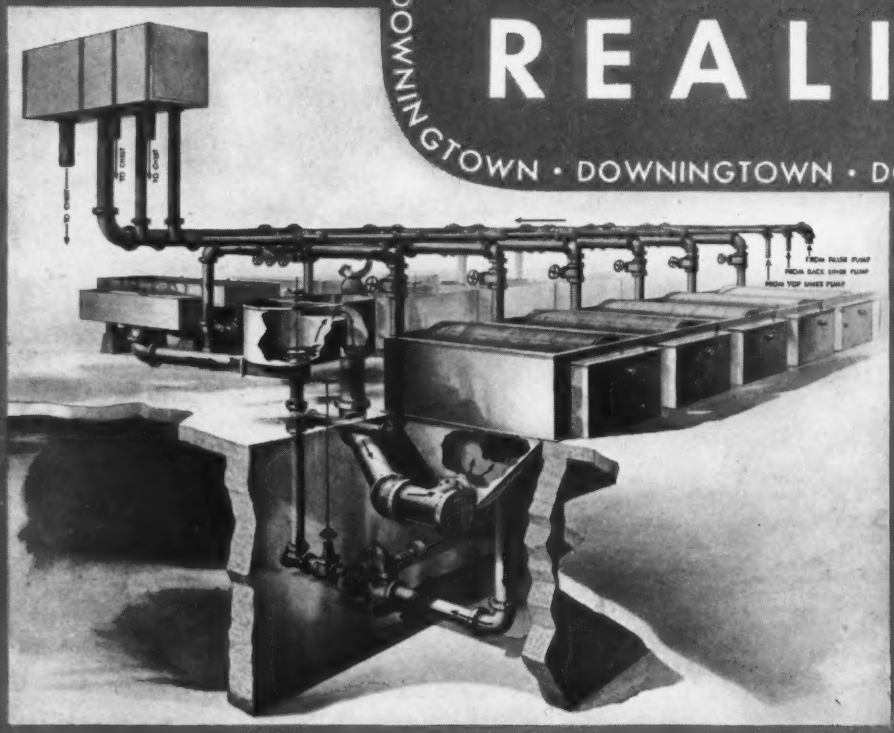
NOFOME
Approach Flow System
Follow Arrows in Drawing

Liner and Filler Stock are circulated from the Stuff Chests (not shown) and through the three parallel overhead pipes to the Head Boxes, which overflow back to the Stuff Chests. Each Triplex Valve taps a controlled amount of stock from one of the three parallel pipes into each white water pipe going to each Screen, and from there to each Nofome Mix Box and Vat. White water from Vats is pumped two ways (1) to the Nofome Mix Boxes and (2) to the Screen as previously mentioned.

A PRE-WAR DREAM

Due to the war, many cylinder mills have not realized that what they have long hoped for has been completely developed and is in successful use. It's the Downingtown Nofome Approach Flow System which provides an inexpensive, foolproof method for getting the stock into the vats. It has many advantages long dreamed of, but now a reality. . . . Only about 5 minutes' time of one man is required to change grade. Liner or Filler may be fed into any vat for any exact pointage, by simply setting the indicator on each vat, like the last run of the grade desired. All control valves are within easy reach of the floor. No climbing ladders up under the roof. No scurrying around. No offweight board. Instead, higher production and higher quality. . . . May we tell you more? We believe then you'll want to include this in your Post-War Plans. . . . Downingtown Manufacturing Company, Downingtown, Pa.

A *POST-WAR REALITY



* *Who knows? Possibly our Government will release the materials for improvements in paper mills sooner than you or we expect. Better start plans NOW for your Post-War Mill.*

PAPER TRADE JOURNAL

Title Reg. U. S. Pat. Off.
Established 1872

Volume 118 Number 24

Published every Thursday by Lockwood Trade Journal Co., Inc.

Executive and Editorial Offices: 15 W. 47th St., New York 19, New York, U. S. A.

Tel. BRyant 9-0860 New York 19, N. Y.

GEO. S. MACDONALD
President

ARTHUR E. GORDON
Executive Vice-Pres.

JOSEPH P. HORGAN
Secretary

GEO. E. LOCKWOOD
Treasurer

HENRY J. BERGER
Editor

STILLMAN TAYLOR
Associate Editor

R. G. MACDONALD
"TAPPI" Editor

LYNN M. LAMM
Washington Correspondent
All of 15 W. 47th St.

Western Representative:
H. K. VINTON
123 West Madison St., Chicago, Ill.

Subscriptions: (Payable in advance) By the year $4.00; Single Copy 10 cents.

Postage Extra: To Canada $2.00; To Other Foreign Countries $3.50.

Member Audit Bureau of Circulations

PAPER *established Feb. 17, 1899, combined with* PAPER TRADE JOURNAL *Nov. 16, 1899.* PAPER *established Sept. 21, 1910, combined with* PAPER TRADE JOURNAL, *Feb. 19, 1925.* *All rights to the above titles reserved.*

PAPER TRADE JOURNAL *is entered as Second Class matter at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. Publication Office of Lockwood Trade Journal Co., Inc., 34 N. Crystal St., East Stroudsburg, Pa. Printed in U. S. A.*

Copyright 1944 by the Lockwood Trade Journal Company, Inc. The contents of PAPER TRADE JOURNAL *including all articles, illustrations, etc., are covered by copyright and may not be reprinted except by permission.*

CONTENTS

JUNE 15, 1944

	PAGE
Joint Printing Committee Opens Paper Bids	7
New Wood Pulp Uses Attracting Attention	8
G. D. Jenssen Co., Inc. Get Charter	8
United Jewish Appeal Asks $65,000	8
City to Use Waste Liquor on Its Streets	10
Kimberly-Clark to Receive "E" Award	10
Bergstrom Co. to Add More Space	10
Ernst Mahler Elected a Director	10
Register for Safety Conference	10
Kimberly Mill Starts Safety Contest	10
Issues New Paper Board Order	11
International Holdings Published	11
L. A. Ellis Speaks on Paper	11
Dean Illick on States Survey Board	11
Short Paper Supply Clouds Fall Outlook	12
Possible New Post-War Outlets	12
Publishers Stress Salvage Work	12
Play Closes Chicago Group Program	12
Waste Ceilings Change Just Rumors	12
Payrolls Up in Paper Industry	14
Westinghouse Shows New Plastics	14
Barrell's Paper Annual Issued	14
Boston Trade Notes	14
Government Paper Awards	15
Pulpwood Prices Up in Five States	15
Obituary	16
Give Dinner for S. L. Foster	16
B. C. Paper Production in 1943	16
Financial News	18
Market Guide for Latin America	18
Commercial Timbers of the United States	18
Sorg Paper Co. Changes	22
M. & O. Elects Officers	22
Louis W. Sutherland Gets LL.D.	23
New Type of Raft for Logging	23
Newfoundland Makes Less Paper	23
Editorial	24
Paper Board Output	24
K. E. Tozier Now First Sergeant	25
Production Ratio Report	25
Latest Market Review	40
Miscellaneous Markets	42
Market Quotations	42
New Truck-Man	46
Classified Advertising	48

Technical Section *("TAPPI")*

Water Resistance of Paper and Paperboard	27
United States Patents on Papermaking	29
Properties of Sodium Peroxide Bleached Mechanical Pulp and Its Application in Paper Manufacture	33
Hot Melt Coatings and Laminants	37
TAPPI Notes	38

PAPER TRADE JOURNAL IS INDEXED IN INDUSTRIAL ARTS INDEX

INDEX TO ADVERTISERS ON PAGE 54

West Virginia Pulp and Paper Company

230 Park Ave.
New York

35 East Wacker Drive
Chicago

Public Ledger Building
Philadelphia, Pa.

503 Market St.
San Francisco, Cal.

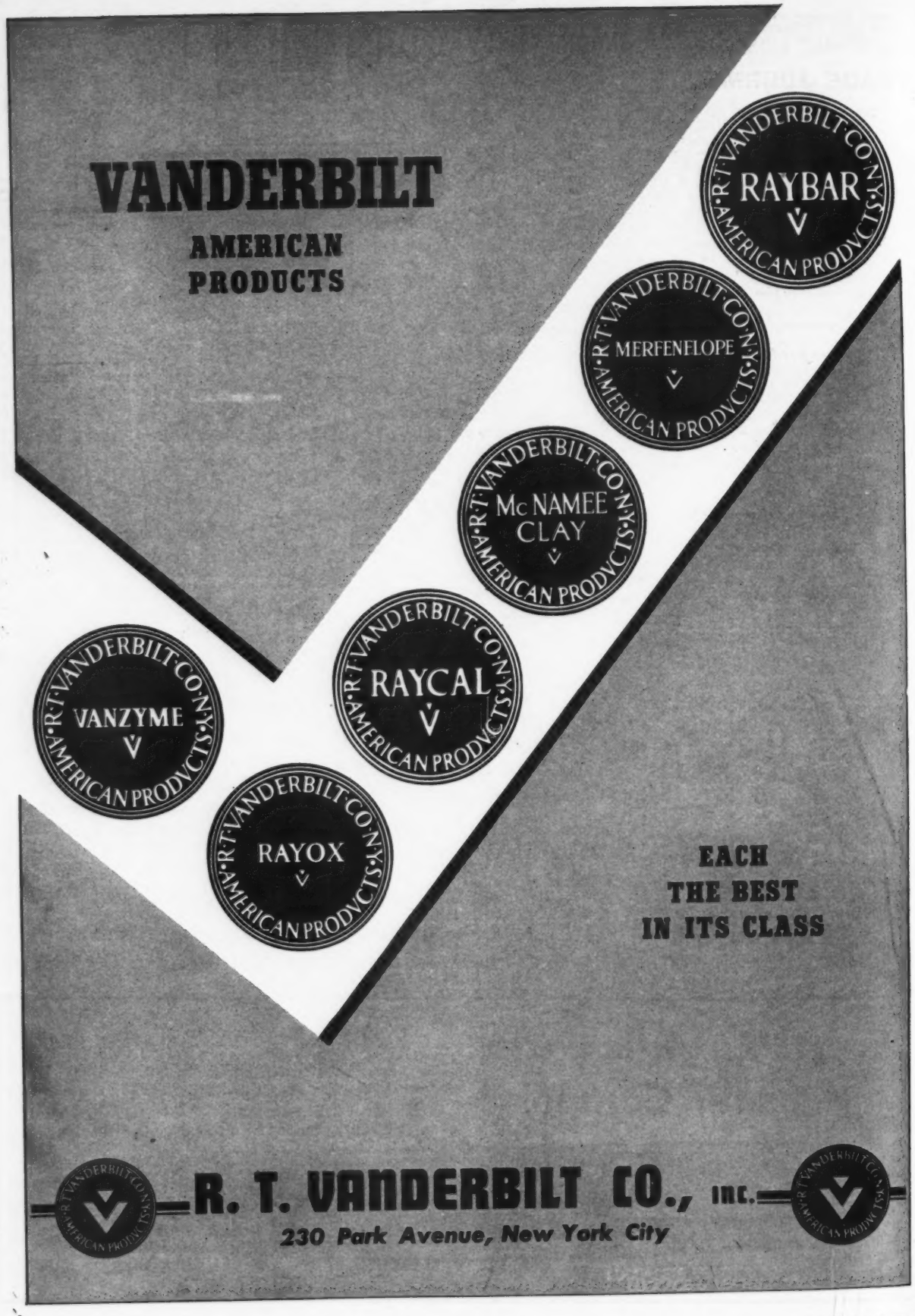
MILLS:

Mechanicville, New York
Luke, Maryland
Covington, Virginia

Tyrone, Pennsylvania
Williamsburg Pennsylvania
Charleston, South Carolina

Manufacturers of
ENGLISH FINISH SUPERCALENDERED
MACHINE FINISHED BOOK
and LITHOGRAPHIC PAPERS
Offset Envelope, Bond, Writing, Mimeograph, Ledger
Eggshell, Cover and Music Papers, Index Bristol,
Post Card and Label Papers
HIGH GRADE COATED BOOK

KRAFT WRAPPING AND KRAFT ENVELOPE
KRAFT LINER BOARD
BLEACHED SULPHITE AND SODA PULP
BLEACHED AND UNBLEACHED KRAFT PULP


VANDERBILT
AMERICAN
PRODUCTS
R·T·VANDERBILT·CO·N·Y·
RAYBAR
AMERICAN PRODUCTS
MERFENLOPE
McNAMEE
CLAY
RAYCAL
VANZYME
RAYOX
EACH
THE BEST
IN ITS CLASS
R. T. VANDERBILT CO., INC.
230 Park Avenue, New York City

Vol. 118, No. 24

PAPER TRADE JOURNAL

Title Reg. U. S. Pat. Off.

June 15, 1944

Joint Printing Committee Opens Paper Bids

Greatly Reduced Number of Proposals Are Received For Furnishing the Government Printing Office With Paper For Three Months' Period Beginning July 1 — Awards To Be Made June 19.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 12, 1944—Bids were opened today by the Joint Committee on Printing for paper for the use of the Government Printing Office for the three months period beginning July 1. The Committee will meet June 19 to consider awards. The bids were as follows:

Newsprint

No. 1—1,500,000 lbs., 24x36—64: rolls, 19, 24, 36 and 48 ins. wide (3-inch fiber cores, weight of cores and wrappers shall be included in net weight).

Marquette Paper Corp. (600,000 lbs. only — ceiling price) 2.90c

Telephone Book News

No. 2—200,000 lbs., 24x36—45; rolls, 28 38 and 48 ins. wide (3-inch fiber cores). (Weight of cores and wrappers shall be included in the net weight.)

Birmingham & Prosser Co..... 5.38c
Stanford Paper Co. 5.38c

Machine-Finish Book

No. 3—250,000 lbs., 25x38—70; flat, cut 22½x31, 28½x48, 31¼x45½ and 32x42 ins.

Marquette Paper Corp. 7.98c

No. 4—500,000 lbs., 25x38—70; flat, cut 24x38, 28x38, and 38x48 ins.

Barton, Duer & Koch Paper Co. 7.95c

No. 5—500,000 lbs., 25x38—70; flat, cut 24x38, 28x38, and 38x48 ins.

Barton, Duer & Koch Paper Co. 7.95c

No. 6—400,000 lbs., 25x38—70; rolls, 28½ ins. wide (3-inch fiber cores.)

Birmingham & Prosser Co. 7.20c
Perkins-Goodwin Co. 7.12c
Barton, Duer & Koch Paper Co. 7.55c
Mudge Paper Co. ..... (200,000 lbs. only) 7.59c
Central Ohio Paper Co. ..... (400,000 lbs. only) 7.19c

No. 7—750,000 lbs., 25x38—70; rolls, 19 and 38 ins. wide (3-inch fiber cores).

Paper Corp. of U.S. ..... (500,000 lbs. only) 7.24c
Perkins-Goodwin Co. 7.12c
Barton, Duer & Koch Paper Co. 7.55c
Mudge Paper Co. ..... (200,000 lbs. only) 7.95c
Walker Goulard Plehn Co. .... (100,000 lbs. only) 7.20c
Allied Paper Mills ..... (276,000 lbs. only) 7.20c
Marquette Paper Corp. ..... (600,000 lbs. only — ceiling price) 7.19c

No. 8—750,000 lbs., 25x38—70; rolls, 19 and 38 ins. wide (3-inch fiber cores).

Paper Corp. of U.S. ..... (500,000 lbs. only) 7.24c
Perkins-Goodwin Co. ..... (1,155,000 lbs. only) 7.12c
Barton, Duer & Koch Paper Co. 7.55c
Mudge Paper Co. ..... (200,000 lbs. only) 7.59c
Allied Paper Mills ..... (375,000 lbs. only) 7.20c
Marquette Paper Co. ..... (600,000 lbs. only — ceiling price) 7.19c

No. 9—600,000 lbs., 25x38—70; rolls, 24, 36 ,and 48 ins. wide (3-inch fiber cores).

Barton, Duer & Koch Co. 7.55c
Mudge Paper Co. ..... (200,000 lbs. only) 7.59c
Allied Paper Mills 7.20c

No. 10—1,000,000 lbs., 25x38—80; flat, cut any size, min. width 24 ins., max. width 48 ins.

Barton, Duer & Koch Paper Co. 7.40c

Offset Book

No. 19—2,000,000 lbs., 25x38—80; flat, cut 32x42, 34x44, 35x45, 36x56, and 38x48 ins., the grain to run lengthwise of the sheet.

R. P. Andrews Paper Co. ..... (600,000 lbs.) 8.69c
Paper Corp. of U.S. ..... (500,000 lbs.) 8.69c
Central Ohio Paper Co. ..... (300,000 lbs.) 8.70c

No. 20—4,000,000 lbs., 25x38—100; flat, cut 32x42, 34x44, and 38x48 ins., the grain to run lengthwise of the sheet.

R. P. Andrews Co. ..... (400,000 only) 7.56c
Butler Co. ..... (120,000 lbs. only) 7.30c
Whitaker Paper Co. ..... (400,000 lbs. only) 7.54c

Antique Book

No. 22—100,000 lbs., 25x38—90; flat, cut 33x43 and 38x50 ins.

No bid.

Lightweight Machine Finish Book

No. 23—80,000 lbs., 25x38—60; flat, cut 28x38 and 38x48 ins.

Graham Paper Co. 8.67c

50 Per cent Antique Book

No. 26—50,000 lbs., 25x38—80; flat, cut 38x48 ins.

Whitaker Paper Co. 14.94c

Supercalendered Book

No. 33—1,500,000 lbs., 25x38—90; flat, cut any size, min. width 24 ins., max. width 48 ins.

No bid.

No. 34—800,000 lbs., 25x38—90; rolls, 28½ and 38 ins. wide (3-inch fiber cores).

R. P. Andrews Paper Co. 7.33c
Mudge Paper Co. ..... (200,000 lbs. only) 7.35c

Machine-Coated Book

No. 37—500,000 lbs., 25x38—90; flat, cut 28½x48, 31¼x45½, 32x42, 35x45, 36x56, 38x48, and 39x50 ins.

Barton, Duer & Koch Paper Co. 6.47c

No. 38—400,000 lbs., 25x38—100; flat, cut any size, min. width 24 ins., max. width 48 ins.

Barton, Duer & Koch Paper Co. 7.04c

No. 39—400,000 lbs., 25x38—120; flat, cut any size, min. width 24 ins., max. width 48 ins.

Barton, Duer & Koch Paper Co. 6.55c

Ground Wood Mimeograph

No. 44—2,000,000 lbs., No. 36; flat, cut 32½x42½, and 38x48½ ins., grain as ordered.

Mead Sales Co. ..... (600,000 lbs. only) 5.80c
Old Dominion Paper Co. 5.748c

Chemical Wood Mimeographed, White and Colored

No. 45—1,000,000 lbs., white, No. 36; flat, cut 32½x42½ and 38x48½ ins.; the grain to run as ordered.

R. P. Andrews Paper Co. ..... (400,000 lbs. only) 6.80c
Whitaker Paper Co. ..... (400,000 lbs. only) 6.91c
Eastern Corp. 8.63c

25 Per Cent Mimeograph

No. 47—100,000 lbs., No. 36; flat, cut 32½x42½; 34½x44, and 38x48½ ins.; the grain to run as ordered.

Virginia Paper Co. 10.00c
Old Dominion Paper Co. 9.67c
Aetna Paper Co. 9.37c

Blue U S M O Safety Writing

No. 48—250,000 lbs., No. 32; rolls, 22 ins. wide, 24 ins in diameter (3-inch fiber cores).

R. P. Andrews Paper Co. 12.83c
D. L. Ward Co. ..... (125,000 lbs. only) 12.79c

(Continued on page 19)

New Wood Pulp Uses Attracting Attention

Bright Future Foreseen For North American Pulp and Paper Industry In New Uses of Wood For Production of Alcohol and Plastics —New Willamette and Howard Smith Plants Are Now Building.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., June 12, 1944—The future of the pulp and paper industry in Canada should be bright if some of the developments of the last four or five years realize the expectations of forward-looking engineers. Aside altogether from the many new uses to which pulp and paper have been put since the war began, there are also new vistas opening up of a far greater utilization of the wood available.

At the moment Canadian pulp and paper producers are watching with interest the results anticipated by the promoters of the huge Willamette Valley Wood Chemical Company which is building a plant near Eugene, Oregon, for production of industrial alcohol by the hydrolysis of wood wastes. If it ever becomes necessary to conserve grain to that extent there should be no lack of industrial alcohol in Canada as long as the pulp and paper industry has so much wood waste.

New Plastic To Be Made By Howard Smith

Another "experiment" being watched with interest is the plant now being constructed at Cornwall, Ont., by Howard Smith Paper Mills, Ltd., which is designed to manufacture a new, hard plastic from lignin. This new plastic, which is said to be tough and strong is a by-product of Canadian pulp and paper manufacturing and is the result of a new process developed under the auspices of the Department of Munitions and Supply, and the WPB.

No Details Disclosed

All details of the process, except the mere statement concerning the source of the raw material and the type of product resulting, are strictly confidential and known only to those immediately involved and the military authorities. It is known, however, that the plant being built at Cornwall is considered to be a "pilot" plant only, and will be enlarged from time to time as circumstances dictate and the success of the enterprise grows. It is understood that all experimental work has been completed and most of the production problems ironed out. The new process makes use of the lignin in wood pulp which has hitherto been of little real worth in the industry.

"What we are really doing is taking the wood apart and putting it together again," is the way E. H. Tomlinson, chief chemical engineer for Howard Smith Paper Mills, Ltd., puts it, but that is as far as he will go in explaining the process.

One who has seen the new plastic describes it as being a hard metallic looking material with a shiny glass-like surface. It is almost impossible to break and is surprisingly light in weight. It can be produced in sheets of any desirable thickness and in any shape or form. Engineers state that it has good possibilities for use in construction at an economic cost. It is weather proof and will take a surface of wood veneer. All present production will be for war purposes.

Reports Extensive Use of Paper

H. H. Bowen, chief of motive power and rolling stock of the Canadian Pacific Railway, reports that a search of the records shows that up to May 1, nearly 2,000,000 square feet of linen and paper have been used in making the necessary blueprints, tracings, vandykes and photographs.

G. D. Jenssen Co., Inc. Get Charter

A New York State charter was granted on May 17 incorporating the G. D. Jenssen Company, Inc. with offices at 103 Park avenue, New York City. The new corporation will continue to carry on the business of the G. D. Jenssen Company, long identified with the pulp and paper industry as the builders of the Jenssen acid system.

J. D. Jenssen, president of the new company, has been active in the service of the sulphite pulp and paper industry since he first came to this country in 1901 from Norway. Mr. Jenssen served in the engineering offices of J. H. Wallace, consulting engineer, in New York and in the office of H. S. Ferguson, consulting engineer, at Millinocket, Maine, until 1905, when Mr. Jenssen returned to Europe. From 1905 to 1909 Mr. Jenssen served as plant engineer at Koenigsberg, Germany, and at Rosenberg, which was in Hungary at that period. In 1909 Mr. Jenssen returned from Europe and assumed activities with Riordon Company, Ltd., at Hawkesbury, Ontario, Canada. In 1916 Mr. Jenssen joined with his brother G. D. Jenssen, and since that time the activities of the organization have been carried on under the registered name of G. D. Jenssen Company.

As of the present date, there are 89 Jenssen tower installations in actively operating sulphite mills on this continent. The first two-tower system was erected at the plant of the J. & J. Rogers Company at Ausable Forks, N. Y. The original four-tower system in the U. S. A. was built at the Hammermill Paper Company plant in Erie, Pa. In addition to the many installations on this continent, Jenssen acid systems have been built in all European pulp producing countries.

The new company is planning an expansion of activity and will offer improved acid plants and other process developments as a current and post war program.

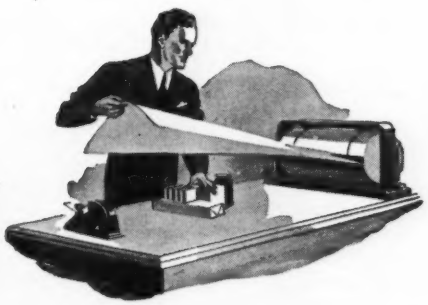
United Jewish Appeal Asks $65,000

Setting a goal of $65,000 in its campaign for the United Jewish Appeal, a sum nearly double the amount raised for the same cause last year, leaders in the graphic arts, fine paper, and stationery industry are holding a dinner on Tuesday evening, June 27, at the Roosevelt Hotel, to mark the formal launching of their extenstive drive.

The campaign, headed by Co-Chairmen Samuel T. Baron of the Royal Paper Corporation, and Harold M. Davis of Davis, Delaney, Inc., is part of the United Jewish Appeal's nation-wide effort to raise $32,000,000 for overseas rescue and relief, aid to Palestine, and refugee rehabilitation. Representatives of New York's foremost firms have already indicated they will attend the June 27th function.

CANCEL YOUR INVITATION TO MOLD!

Take the proper steps now—cancel your invitation to mold and all of its destruction—with Dowicide. There are seventeen related products whose chief function is to help you defeat the scourge of mold bacteria and insects in your business. Backed by years of research and increasing industrial acceptance, the Dowicides are ready to help you with a definite control.



To produce constant strength, high quality paper, every operation from the pulp stage on through to final product must be constantly guarded against mold attack. Dowicides added to the stock chest prevent "souring" of pulp. So, too, lap stock in storage can be protected from mold stain.

Special mold resistant papers, such as soap wrappers, can be dependably produced by the addition of Dowicides during manufacture. Even the adhesives used in various operations can be moldproofed.

The simplicity of the methods of applying Dowicides to paper makes it an operation that any manufacturer can perform with economy.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland
Detroit • Chicago • St. Louis • Houston • San Francisco
Los Angeles • Seattle

DOWICIDE

GERMICIDES AND FUNGICIDES

Among the many Dow products serving the Paper Industry are: Methocel, Ethocel and Caustic Soda.

DOW

City To Use Waste Liquor on Its Streets

Marinette Common Council Decides To Use $800 Worth of Waste Liquor Supplied By Marinette Paper Co.—Kimberly-Clark Plan For "E" Award — Register For Safety Conference — Other News.

[FROM OUR REGULAR CORRESPONDENT]

Appleton, Wis., June 12, 1944—The street department of the city of Marinette, Wis., will use sulphite waste liquor from the Marinette Paper Company as a dust allayer, the Marinette common council decided at a meeting June 6. The cost to the city will be $2 per 1,000 gallons and if the city contracts to buy $800 worth of the liquid, the company will supply without cost enough for three additional treatments.

The city will treat about 30 miles of dirt and gravel streets. It is said that the compound compares in efficiency to chloride treatment. Last year, the city spent $840 for chloride.

The city will pay $160 for a 750-gallon wooden tank with a gravity feed, which will be mounted on a truck. The paper company will provide a storage tank with a capacity of 5,000 gallons. A council member pointed out that the waste from the digesters at the paper mill will serve a double purpose by allaying dust and avoiding stream pollution. The liquid, applied cool, is said to have a good binding effect.

Kimberly-Clark to Receive "E" Award

Plans and details for the ceremony Tuesday, June 20, when the Ordnance division of Kimberly-Clark Corporation, Neenah, Wis., will receive the Army-Navy E award, highest honor given for industrial production, will be headed by Walter Mumme of the corporation.

Initial arrangements for the ceremony were made June 6 when George B. Vidal of the Chicago Ordnance district conferred with officials of Kimberly-Clark.

Bergstrom Co. To Add More Space

Fluor Brothers Construction Company, Oshkosh, Wis., last week started construction of an addition to the Bergstrom Paper Company, Neenah, Wis. The addition, on top of the present warehouse, will house rest rooms, shower facilities, dressing rooms and lockers for both men and women working in the scrap paper department. It will eliminate the present women's rest room in the department. Structural steel is being set, and the project will be completed in about two weeks.

Fluor Brothers recently completed the $5,000 addition to the Kimlark office of Kimberly-Clark Corporation, Neenah, now known as the Ordnance division. The division's entire office personnel is now in the new addition.

Ernst Mahler Elected a Director

Ernst Mahler, executive vice-president of Kimberly-Clark Corporation, Neenah, Wis., has been elected to the board of directors of Allis-Chalmers Manufacturing Company, Milwaukee, Wis., Walter Geist, A-C president, announced June 8, after a meeting of the board. Mr. Mahler succeeds R. G. Hutchins, New York, who retired after 31 years of service on the board. The directors adopted a resolution thanking Mr. Hutchins for his faithful service since 1913, when organization of the company was completed.

Mr. Mahler, a chemical engineer, came to Kimberly-Clark in 1914. He holds many patents in the pulp and paper field. Lieut. Gen. Brehon Somervell in January, 1943, as a member of the purchase policy advisory committee of the War Department. Previously, he served as chairman of the chlorine committee for the paper industry and as a member of the over-all advisory committee to the War Production Board for the paper industry.

Under his direction, the engineering and research facilities of Kimberly-Clark were made available to the government for war work, and the corporation's Ordnance division has become an important manufacturer of mounts for anti-aircraft guns.

During World War I Mr. Mahler developed a cellucotton wadding and absorbent from spruce cellulose which played an important part in relieving the shortage of surgical cotton. From this resulted such products as facial tissue and insulating material.

In 1929, he helped found the Institute of Paper Chemistry at Appleton, Wis. In 1932, he was awarded the gold medal of TAPPI, and in 1937 Brown university awarded him an honorary doctor of science degree. He is chairman of the board of directors of the International Cellucotton Products Company, Chicago; vice president and director of the Spruce Falls Poer and Paper Company, Ltd., Toronto, Canada, and a director of the First National Bank of Neenah.

Register For Safety Conference

About 275 persons from a wide area of the state had registered last Thursday for the fourteenth annual Wisconsin River Valley Safety Conference at Marshfield, Wis., and registration was expected to reach 400. General sessions were held at the Willard D. Purdy school during the day, with the Army and Community building the scene of a 6 o'clock banquet and the concluding session of the conference in the evening.

D. J. Kenney, West Bend, Wis., a past commander of the Wisconsin Department of the American Legion and a candidate for the Republican nomination for governor, was the principal speaker at the banquet. His subject was "Postwar Planning."

A luncheon meeting for foremen was held at noon at Hotel Charles at which John Tepoorten, Madison, occupational extension coordinator for Wisconsin, was the speaker. Safety problems were discussed.

The paper and pulp section met at 2 o'clock in the afternoon in the Purdy auditorium. A. F. Bauman of the Marathon Mills Company, Rothschild, Wis., was chairman. A panel discussion was a feature.

Virtually all paper mills and allied industries of the Wisconsin River Valley were represented.

Kimberly Mill Starts Safety Contest

A safetly contest which will run for five months has been started at the Kimberly, Wis., mill of Kimberly-Clark Corporation. It will end Nov. 1. Various departments are competing as units. At the end of each month, each unit with a perfect record

for the month will receive a cash award. On-duty accidents, when an employee cannot return to work on his regular shift the following day will be counted against his unit, which will be eliminated for that month only.

More Water in Wisconsin Reservoirs

A gain of 414,000,000 cubic feet in its upper reservoir system was reported by the Wisconsin Valley Improvement Company, Wausau, Wis., for the week ending May 5. The gain for the week in the Big Eau Pleine reservoir was 7,000,000 cubic feet. The entire reservoir system is now at 85.07% of capacity. The total storage, 14,477,000,000 cubic feet on June 4, compared with 15,741,000,000 for the same date a year ago.

Thilmany Organizes Softball League

A softball league has been organized at the Thilmany Pulp and Paper Company, Kaukauna, Wis. Four teams will play at 6 o'clock Tuesday and Thursday evenings at the Kaukauna ball park. Jerseys have been ordered by the mill. They will bear the Thilmany insignia on the front and the team name on the back.

Issues New Paper Board Order

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1944.—Additional controls over production, distribution, delivery and use of paper and certain paper boards were effected by an amendment to Conservation Order M-241, the Paper Division of the War Production Board reported today. Specific control of 100% of critical electric condenser tissue is assumed by WPB after July 1, and no consumer may accept delivery from a producer without specific authorization of WPB, officials of the Paper Division pointed out.

Reserve production of rag content papers is set up at 35% of production, instead of the regular 20% reserve applying to other papers and specific paper boards. Primary needs of the Army and Navy for preferred procurement, covering paper and paper board, were established by amendments, to make sure that the military programs are not delayed by paper problems, WPB said.

Order M-241 as amended relinquishes control of folding and setup box boards and certain miscellaneous paper boards to a new paper board order (M-378) issued yesterday. Control over asbestos paper is relinquished to Order M-79. Control over container board was transferred to Order M-290 some time ago.

Cardboards and pressboards WPB said, remain under M-241 with a 20% production reserve.

International Holdings Published

A current survey of newspaper finances and financing, published by the *Chicago Tribune*, this week points out that the principal financial investment in the *Chicago Times*, Chicago daily newspaper, is that of the International Paper Company which is reported to own the entire $2,918,000 debentures issued by the company which publishes that paper. The debentures, which mature in 5½ years, are secured by a first mortgage on all property owned by the Times. International Paper is also reported as the registered owner of 5,989 shares of Times stock, 6.45% of the total outstanding. The survey adds that A. R. Graustein, a former president of International Paper, owns 3147 shares or slightly more than 3% of the total.

L. A. Ellis Speaks on Paper

Louis A. Ellis of the Northwest Paper Company's Chicago sales office and a member of the Salesmen's Association of The Paper Industry, was the guest speaker at the Jeffersonville Rotary Club, Jeffersonville, Ind., on Tuesday evening, May 9, 1944. His subject was "Paper Manufacturing and Its Essentiality."

Mr. Ellis explained the various processes of paper manufacturing from its earliest days when it was made exclusively by hand, to the present time with its modern equipment. He impressed upon his audience the essentiality of paper in the war effort, as well as in civilian life, and explained some of the reasons for the shortage of paper for non-essential use. In closing he appealed to his audience to be patient with the printer and the paper merchant and not to blame the mill when they find that they cannot get the exact type, color or weight of paper desired for a certain job of printing.

LOUIS A. ELLIS

Dean Illick on States Survey Board

The appointment of Dr. Joseph S. Illick, acting dean of the New York State College of Forestry, as a member of the Advisory Board of the Charles Lathrop Pack Forestry Foundation for a three-year period, has just been announced by the Foundation, Washington, D. C.

The Pack Foundation is incorporated under the laws of the District of Columbia to promote educational and scientific projects in the field of forestry and to increase public appreciation of forests and their contribution to human welfare. The Foundation is financing forestry projects at five important American schools of forestry and awarding substantial prizes in many schools and colleges for increasing the knowledge of forestry among students.

The Foundation also sponsors a wide range of forestry studies and the publication of their results. Among the main projects now being developed by the Foundation is a nation-wide study of state forest administration. This is conducted in cooperation with the Society of American Foresters.

The Advisory Board to which Dean Illick was appointed functions under the chairmanship of Henry Solon Graves, dean emeritus of the Yale School of Forestry.

Short Paper Supply Clouds Fall Outlook

Heavy Demand and More Limited Trade Supplies In Wrapping Paper and Paper Board Causes Concern For Future—Salesmen Set Golf Dates — Waste Paper Market Upset — Other Market News.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., June 12, 1944—The Chicago paper industry spent much of its spare time this week wondering about pulp allocations for the third quarter. In most offices the thinking was none too optimistic and, in general, paper executives here were "expecting the worst." The industry also was not overly excited about recent amendments to MPR 450 and 451 which would permit manufacturers of writing, book and other fine papers to make individual adjustments in manufacturers price ceilings on book, writing and other fine papers. Even if recognition of a "squeeze" did develop, in the opinion of many local merchants and manufacturers representatives, the readjustment would only mean a bare "breaking even" and "not sufficient, certainly, to provide a real impetus for an increase in production even if manpower conditions would permit it." It is understood here that some groups would not even approve the amendment because of the smallness of the proposed adjustments.

Meanwhile, all local markets suffered because of continued grave shortages. Sulphites were in extremely heavy demand while board manufacturers and representatives were much concerned over the Fall business outlook and daily expecting stringent programs to force conversion of setup and folding boxes by retail users. Krafts were "out of sight," particularly the heavier grades while waste paper collections continued better only in "rumour" form as word from the East as to price adjustments continued to be indefinite.

Possible New Post-War Outlets

Of more than ordinary interest to the paper trade is the growing feeling in the grocery industry that all perishable foods will be prepacked before they reach the retail grocery counters. The tendency gained added momentum this week when W. J. Stelpflug, St. Louis merchandising consultant, stressed the point at the annual meeting of the National Association of Retail Grocers held in Chicago. The speaker predicted that present refrigeration equipment can successfully be used for the retailing of prepackaged perishable foods with some of the work done in a central processing plant to be set up in retail stores with the remainder of the stores receiving their prepackaged goods after it has been packed by hand.

Publishers Stress Salvage Work

A discussion of waste paper salvage promotions featured the recent meeting of the Inland Daily Press Association held in Chicago. The first speaker on a special "salvage" program, John R. Robinson, chairman of the Chicago Newspaper Publishers Association Salvage Committee, outlined the experience of this city. He pointed to two experiences as indicative of what can be done "by proper publicity and organization." On November 11, last, Chicago staged a citywide curb pickup with one thousand trucks and 4000 volunteers. The result was 750 tons of waste paper in one day. On December 20, after the full publicity program was organized—another pickup program with 750 trucks and 3500 volunteers—and the result was 2733 tons of waste paper! "That is the difference," Mr. Robinson pointed out, "between full publicity and promotion and little or none at all. It explains why the paper industry, the press and interested citizens should get together to do the job. Mr. Robinson also stressed the importance of collections in the school systems. Reports of excellent results were also listed by Port Huron, Michigan; Wausau, Wisconsin; Monroe, Michigan; Watertown, Wisconsin; Minneapolis and other cities.

Salesmen Set Golf Dates

The western division of the Salesmen's Association of the Paper Industry has definitely settled on Friday, June 16 for the first of two summer golf outings which are always an important part of the SAPEYE program. The initial event, under the supervision of L. A. Ellis, Northwest Paper Company, golf chairman, will be held at the Park Ridge Country Club. Informal noon luncheon, golf and an evening dinner with proper prizes and singing and general festivities will round out the day's program. Mr. Ellis looks for a good attendance because only two outings will be held during the season instead of the customary one a month. The second outing will be held later in the summer at a time and place not as yet designated.

Play Closes Group Program

The Chicago Professional Paper Group held its final monthly meeting of the summer on Monday, June 5 at the Chicago Bar Association. Sessions will adjourn during the summer, resuming in October. The June 5 meeting was attended by one hundred members and guests and featured a three act play designed to acquaint each branch of the industry with the "lingo" of the other. Scenes in a paper mill, in the office of a technical executive and in a paper jobber's office were well presented by a cast headed by Harold Alley, Tested Papers, Inc., and also president of the Group, by A. E. Montgomery of the J. O. Ross Engineering Company; A. W. Neubauer, Glidden Co., V. V. Vallandigham, Kelco Company; Arnold McAneny, Bradner Smith & Co., Wayne Watts and Harold Johnson. Entertainment was provided by Harold Johnson, Joe Wallace, professional entertainer and comedy star whose appearance on the program — which called for volunteer acts and impromptu entertainment—was sponsored by the Manhattan Paste & Glue Company; Paisley Products Company; National Adhesive division of the National Starch Products Company; Arabol Manufacturing Company and Hart & Harrington.

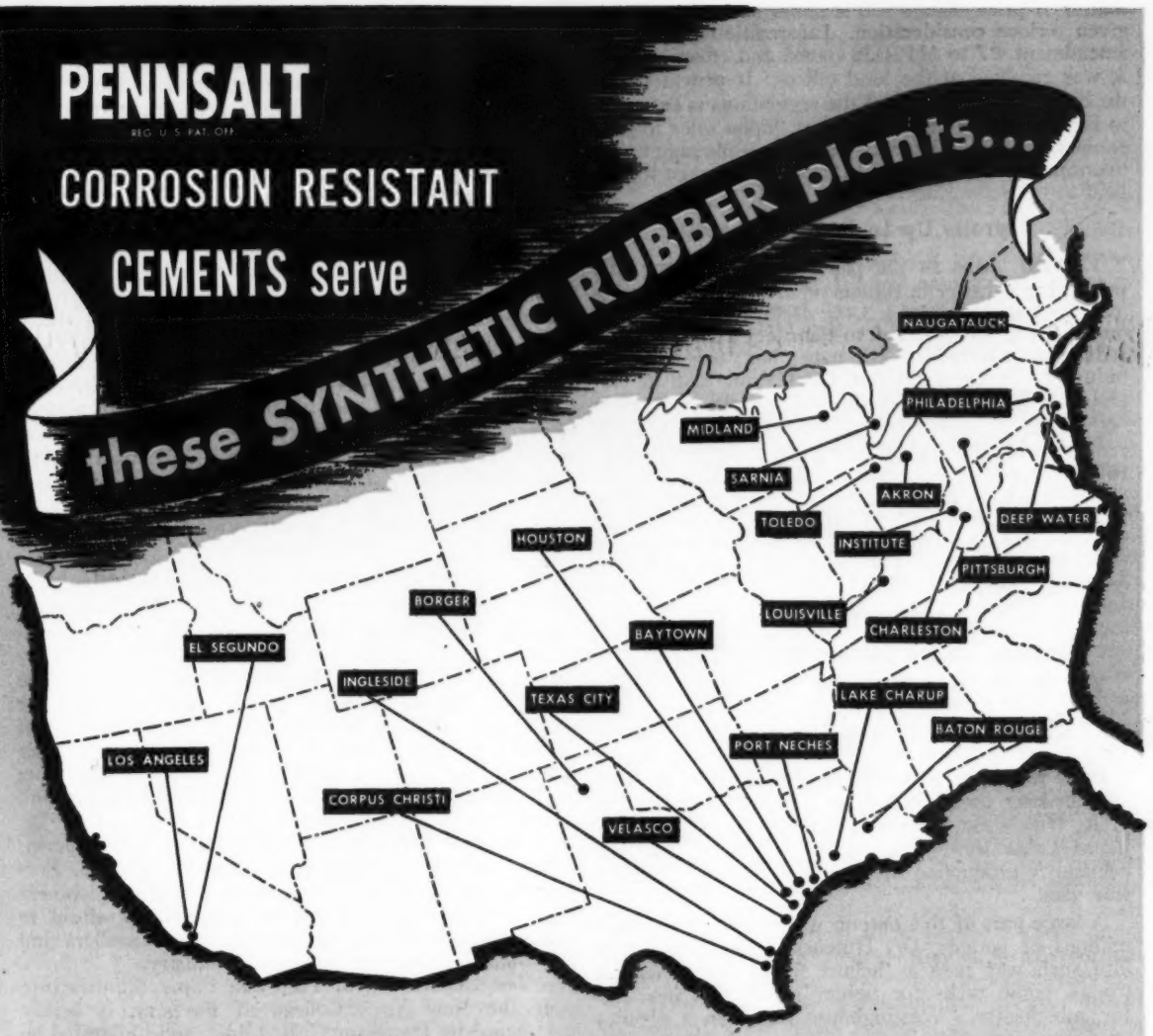
Waste Ceilings Change Just Rumors

As far as rumoured changes in ceiling prices of waste paper are concerned, the Chicago market still does not know where it stands. Last week changes were anticipated but local spokesmen for the Office of Price Administration have said currently that no issuance of any price change has reached the local OPA offices. However, it is known that Washington has been conferring with mill committees and that the

PENNSALT

REG. U. S. PAT. OFF.

CORROSION RESISTANT CEMENTS serve these SYNTHETIC RUBBER plants...



Virtually overnight, America was faced with a grave need for rubber . . . and the sources of supply were shut off! Remember? Well, out of that crisis came the urgent call for synthetic rubber.

Industry's response has been one of the truly amazing stories of service. A few short years ago there were no Synthetic Rubber plants in America. Today there are 24. And Pennsylvania Salt is profoundly proud of the fact that Pennsalt Corrosion-Resistant cements have had a place in the building and maintenance of 22 of these all-important plants. *Penchlor, *Asplit**, and *Causplit** are contributing to the success of synthetic rubber production.**

PENNSYLVANIA SALT MANUFACTURING COMPANY

Chemicals

1000 WIDENER BUILDING, PHILADELPHIA 7, PA.

New York • Chicago • St. Louis • Pittsburgh • Minneapolis • Wyandotte • Tacoma

PENCHLOR is a time-saving, quick-setting, self-hardening sodium silicate cement. Given punishing duty, it serves long and well under severe acid conditions.

CAUSPLIT is an exceedingly strong resin-cement, abrasion-resistant and easy to handle. Use it where conditions are alternately acid and alkali.

ASPLIT is an extremely strong resin-cement for use where conditions are always acid. Like Causplit, it is abrasion-resistant and easy to handle.

Consult Penn Salt technicians concerning your acid or alkali handling problems. Their wealth of experience is at your service without obligation on your part. Write fully or mail the attached coupon.

PENCHLOR is available without restriction.
CAUSPLIT and **ASPLIT** are available only for essential service.

*Trade-marks Reg. U. S. Pat. Off.

SPECIAL CHEMICALS DIVISION
PENNSYLVANIA SALT MANUFACTURING COMPANY
Dept. PT, 1000 Widener Bldg., Philadelphia 7, Pa.

I would like to have a free copy of your new handbook No. 6 on Penchlor Acid-Proof Cement.

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

matter of price change still is under survey and being given serious consideration. Information concerning amendment #7 to MPR 30 issued and effective June 3, was received at the local offices. It provides that the brokerage provision of the regulations is extended to include selling agents and that "upon sales to consumers, an accumulator may add the brokerage to the maximum price, provided that such brokerage will be paid to the selling agent."

Payrolls Up In Paper Industry

The 261 firms in the paper goods, printing and publishing industry in Illinois reporting to the Department of Labor showed a 3.4% decline in employment on March 15 as compared to February 15 and a 3.1% reduction in payrolls. The paper box, bag and tube industry, however, showed a 0.4% increase in employment and a 1.8% increase in payrolls even while "other paper goods" (as classified) showed a 2.3% reduction in employment and a 0.6% decline in payrolls over the same period of time. Average hourly earnings in the paper box, bag and tube industry were 93 cents for men and 63 cents for women and $1 for men and 63 cents for women in the "other paper goods" classification. The earnings were predicated on March reports.

Westinghouse Shows New Plastics

The Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa., displayed four new plastics at a press luncheon held at the Waldorf-Astoria Hotel, New York on June 9. "These plastics and others born of war research will have a variety of important and striking uses when peace comes," declared Dr. J. A. Hutcheson, associate director of the Westinghouse Laboratories, who revealed that 98% of the company's production of plastics is devoted to direct war uses.

A large part of this output, which last year totaled millions of pounds, Dr. Hutcheson said, was going into such war uses as helmet liners for American troops, bomb racks for fighter planes and bearings for sub-chasers. "Westinghouse has been a plastics producer since early in the century and today is the world's largest manufacturer of laminated plastics, which are composed of layers of fabric or paper "welded" together with resin under heat and pressure."

The new moisture proof plastic called Fosterite, will greatly lengthen the life for radio and other communications equipment used by Allied armies, said Dr. C. F. Hill, manager of the Insulation Department of the Westinghouse Research Laboratories. The plastic was named for Newton C. Foster, 29 year old Westinghouse chemist, who developed it after several years of intensive research. Successful development of a "missing link" in the family of plastics, was announced by Dr. Allen Bates, manager of the Chemical and Metallurgical Department of the Westinghouse Research Laboratories. "Heretofore, plastics have been roughly divided into two classes," Dr. Bates said, "those that could be molded into shapes easily but had little strength, and those with great strength but little moldability. This new plastic has both strength and formability to a degree never before achieved in a single plastic material . . . so strong that a one inch square bar can stand a pull of 16,000 pounds, equivalent to the tensile strength of structural steel. After the war," the Westinghouse scientist said, "this plastic will be available for use in hundreds of new products now made of wood or metal. Millions of tiny wood fibers, the same kind of cellulose fibers as in ordinary wrapping paper, give the new material its strength. Under heat and pressure these fibers are tightly locked together with a varnish-like resin to give the finished material its steel-like strength.

Another war-born technique for "strentching" hot plastic material into complicated shapes was described by Eugene R. Perry, manager of the Westinghouse Micarta Department. "We are now able to take flat sheets of plastic material, and after rapidly heating them until they grow soft, form them into intricate shapes never before possible with laminated plastics," Dr. Perry said. "This plastic, called Micarta 444, is now being widely used in the aircraft industry. Because Bicarta 444 has gone exclusively into the aircraft industry and its uses there are increasing every day, post-war applications of the material have hardly been touched. But undoubtedly Micarta 444, because it is a strong, light weight and decorative material, will find many uses in post-war furniture and the field should be greatly widened.

Barrell's Paper Annual Issued

The third volume of Barrell's Paper Annual, edited by William Bond Wheelwright of The Callaway Associates has just appeared.

The lead article, "Post-war Possibilities of the Paper Industry," was written especially for the Annual by R. G. Macdonald, secretary-treasurer of the Technical Association of the Pulp and Paper Industry. It is a constructive essay emphasizing the need for industry-wide effort to have paper and pulp play the leading part of which it is capable.

"Twenty-five Years of Activity in the Superintendents Association," by George W. Craigie, Secretary-treasurer, traces the history and development of this important association which looks ahead to still greater activity and service to its members and affiliates of the pulp and paper industry.

The Department of Pulp adn Paper Manufacture of the New York College of Forestry, is briefly sketched by Professor C. E. Libby, and illustrated by pictures of its facilities and a group photograph of the senior class.

The directory of officials of paper industry associations includes the list of officers of thirty associations, together with photographs of representative officers.

This 1944-1945 edition is bound as usual in buckram-covered boards with plastic shelf-back. Copies are being mailed free of charge to those in the paper industry who have applied already. A few copies remain which may be obtained on request to the William L. Barrell Company, Lawrence, Mass.

Boston Trade Notes

BOSTON, Mass., June 12, 1944—The Office of Price Administration has authorized some paper manufacturers, effective June 1, to make deliveries of the papers produced by them at prices to be increased in accordance with such action as may be taken by the OPA upon their application.

It is a pleasure to note that Charles A. Esty, president of Carter, Rice & Co., Corp., is back at his desk again, after an absence on account of illness.

Albert Devers, well known in the paper trade, has resigned his position of superintendent and purchasing agent of the Filing Equipment Bureau, Inc., 27 Melcher street.

Government Paper Awards

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1944—R. P. Andrews Paper Company has been awarded the contract furnishing the Government Printing Office with 51,000 pounds of white book paper at 7.56 cents. Other awards made on paper bought on the open market include the following.

Northwest Paper Company will furnish 50,000 pounds of cream bristol at 7.61 cents; same at 6.84 cents; same at 7 cents; Barton, Duer & Koch Paper Company, 60,000 sheets of red pressboard at $76.70 per M sheets; same 50,000 sheets of gray pressboard at $186.00 per M sheets; Dill & Collins, 37,650 pounds of white cover paper at 9.9 cents; Arkell Safety Bag Company, 12,500 sheets of waterproof paper at $27.60 per M sheets.

Walker, Goulard Plehn Company will furnish 40,000 pounds of M. F. book paper at 8.06 cents; Stanford Paper Company will furnish 137,000 pounds of white book paper at 7.66 cents; Stanford Paper Company will furnish 137,000 pounds of white book paper at 7.66 cents; Stanford Paper Company will furnish 150,000 pounds of offset paper at 7.56 cents and the Graham Paper Company will furnish 23,000 pounds of yellow C. W. paper at 10.9 cents.

Stanford Paper Company will furnish 300,000 pounds of telephone book news at 5.49 cents and Barton, Duer & Koch Paper Company will furnish 200,000 pounds of white bond paper at 14.19 cents. Barton, Duer & Koch Company will furnish 100,000 pounds of white bond paper at 13.22 cents and the R. P. Andrews Paper Company wil furnish 78,520 pounds of white book paper at 7.56 cents. R. P. Andrews Paper Company will also furnish 30,000 pounds of offset book paper at 7.56 cents and the Stanford Paper Company will furnish 43,300 pounds of map paper at 15.5 cents. The same firm will also furnish 36,900 pounds of same at 15.5 cents and 31,150 pounds of same at 15.5 cents.

Crocker, Burbank Company will furnish 222,000 pounds of fluorescent chart paper at 41.5 cents and the same firm will also furnish 49,900 pounds of same at 41.5 cents. The R. P. Andrews Paper Company will furnish 11,135 pounds of jute tag board at 11.25 cents and the same firm will also furnish 10,000 pounds of binder's board at 4.46 cents.

Paper Corp. of U. S. will furnish 46,000 pounds of white ledger paper at 22.85 cents and Walker Gouldard Plehn Company will furnish 22,400 pounds of buff ledger paper at 15.18 cents. The Eastern Corporation will furnish 100,000 pounds of C. W. paper at 8.63 cents and Barton, Duer & Koch Paper Company will furnish 35,100 pounds of white ledger paper at 22.47 cents and the same firm will also furnish 31,200 pounds of white ledger paper at 22.47 cents. Bermingham & Prosser Company will furnish 153,600 pounds of white ledger paper at 14.45 cents and the Frank Parsons Paper Company will furnish 192,000 pounds of white sulphite paper at 9.25 cents.

Barton, Duer & Koch Paper Company will furnish 50,000 pounds of C. W. duplicator paper at $9.65 per cwt. and Walker Goulard Plehn Company will furnish 15,675 pounds of green cover stock at 10.28 cents. Barton, Duer & Koch Paper Company will furnish 20,000 sheets of buff R. R. board at $73.65 per M sheets.

Keith Paper Company will furnish 40,000 pounds of white ledger paper at 17 cents and Whiting Patterson Company will furnish 40,000 pounds of same at 16.25 cents. D. L. Ward Company will furnish 48,510 pounds of white poster paper at $3,667.36 and the same firm will also furnish 88,000 pounds of white offset paper at $6,864.00 and also 155,520 pounds of white offset paper at 7.56 cents. Also 51,840 pounds of white offset paper at 7.56 cents. Crocker, Burbank Company will furnish 149,700 pounds of wood map paper at 14.07 cents and Castanea Paper Company will furnish 190,000 pounds of white book paper at $14,421.00.

Northwest Paper Company will furnish 74,000 pounds of offset book paper at 7.57 and the Central of Ohio Paper Company will furnish 77,000 pounds of white offset paper at 7.58 cents and the same firm will also furnish 33,000 pounds of same at 7.58 cents.

Canadian International Paper Company will furnish 200,000 pounds of newsprint paper at $58.00 per ton and 150,000 pounds of same at the same price. Cauthorne Paper Company will furnish 36,000 pounds of C. W. mfd. paper at 10.68 cents and Walker Goulard Plehn Company will furnish 50,000 pounds of white ledger paper at 14.07 cents. Same firm will also furnish 50,000 pounds of same at 14.07 cents. Same firm will also furnish 50,000 pounds of same at same price and another 50,000 pounds of same at the same price.

Consolidated Water Power and Paper Company will furnish 640,000 pounds of book paper at $6.10 per cwt. and 185,000 pounds of white chart paper at 14.07 cents. Walker Goulard & Plehn Company will furnish 49,950 pounds of white chart paper at $14.07 per cwt. Central Ohio Paper Company will furnish 46,800 pounds of green writing paper at 8.58 cents and R. P. Andrews Paper Company will furnish 24,600 pounds of green cover paper at 13.13 cents, and R. P. Andrews Paper Company will furnish 24,600 pounds of blue cover paper at 13.13 cents and the Northwest Paper Company will furnish 60,642 pounds of white offset paper at 7.57 cents and the R. P. Andrews Paper Company will furnish 10,000 pounds of gray bristol paper at $1,155.00.

Pulpwood Prices Up in Five States

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1944—Increases ranging from 50 cents to $1.70 a cord in the ceilings for pulpwood in Illinois, Indiana, Missouri, Ohio and Kentucky were announced by the Office of Price Administration today.

At the same time, on sales made in southern Kentucky through dealers, the dealer allowance was increased 25 cents a cord, becoming 75 cents a cord.

A third action establishes ceiling prices of $12.80 a cord for Rough Spruce and $16.00 a cord for Peeled Spruce produced in that part of West Virginia north of the counties of Wayne, Lincoln, Boone, Raleight, Fayette and Greenbrier except the counties of Pendleton, Grant, Mineral, Hardy, Morgan, Hampshire, Berkeley and Jefferson. Previously no spruce ceilings existed in this area, as none of this wood was cut.

These changes, which were effective June 8, 1944, have been made to meet increased costs of production and encourage the output of this vitally needed commodity. The increases will be absorbed by pulp and paper mills buying the pulpwood.

Obituary

Bernard Rous

Bernard Rous, vice-president, treasurer and director of the Grand City Container Corporation, one of the largest independent manufacturers of corrugated paper boxes in the country, passed away suddenly on May 29 at the age of 66. Born in Russia, he came to America at the age of 25 and took pride in relating how he earned the sum of $2.50 per week as a machinist in his first position in America. In 1914, together with Elias Stein and the late David Phillips, he organized the Grand Corrugated Paper Company, located on Grand street in New York City, the entire plant occupying a very small loft. In 1929 the Grand Corrugated Paper Company after acquiring the City Corrugated Paper Products Company., Inc., then changed its name to the Grand City Container Corporation, operating at that time two large plants, one at 128-32d street, Brooklyn, N. Y., and the other at 622-640 West 57th street, New York City. In 1934, the Federal Carton Corporation was organized for the manufacture of folding paper boxes and Bernard Rous also held the offices of treasurer and a director of that corporation. The various businesses expanded and additional space was urgently required.

After years of preparation mainly through the energies and efforts of Bernard Rous, the company erected one of the largest factory plants in the Metropolitan area in North Bergen, N. J., this plant comprising almost 300,000 square feet of factory space on one floor, with a 12 car railroad siding, for the purpose of housing all of the manufacturing and office facilities of the various business operations of the Grand City Container Corporation, Federal Carton Corporation and other affiliated companies. However, destiny ruled that this building was not to be occupied by the company and in October 1942, the entire premises at North Bergen, N. J. were acquired by the Defense Plant Corporation for war purposes. The anxiety and the complications in the construction of the building, the responsibilities for which were mainly his, showed its mark on Bernard Rous and just as the building was completed, he suffered a heart attack which necessitated curtailing his activities.

Always a leader in the corrugated shipping container industry, he headed many industry committees and industry philanthropic drives. He was always active in promoting higher standards of business ethics and competitive relationships. He possessed a very inquisitive and inventive mind and developed many new machines and processes used both in the industry and outside. Patents were issued on quite a number of his processes. Some of his inventions were used in World War No. 1 for military purposes. He was a 32nd Degree Mason, a member of Amos Lodge No. 1, and a member of various philanthropic and religious organizations.

Bernard Rous is survived by his widow, Mrs. Ethel Rous, a daughter Mrs. Ina Spector, two sons, David H. Rous and Arthur Rous, both active in the business, and a brother Solomon.

John C. Ritten

John C. Ritten, 65, died unexpectedly Sunday afternoon, June 4, at his home at Appleton, Wis. He was employed by the Kimberly-Clark Corporation for 33 years and was superintendent of the Kimberly, Wis., mill for 11 years before his retirement in 1928. Survivors are the widow, three daughters and two sons. Funeral services were conducted last Wednesday morning at St. Joseph Church, Appleton, Wis., and burial was in St. Joseph cemetery.

Give Dinner for S. L. Foster

GLENS FALLS, N. Y., June 12, 1944—Officials of the Sandy Hill Iron & Brass Works, of Hudson Falls, held a dinner during the week for Samuel L. Foster, who has resigned as production manager in order to accept a new position. F. A. Juckett presided at the meeting and a wrist watch was presented to the retiring official in appreciation of his services. He has accepted a position as superintendent of engineering for the Kalamazoo Vegetable Parchmen Company, of Kalamazoo, Mich., which also operates branches at Houston, Tex., Philadelphia and a recently acquired property at Espanola, Canada. He will direct engineering activities for all properties and plans to assume his new duties July 1. He is a graduate of Mississippi State College in mechanical engineering and following a post graduate course at Cornell University entered the employ of the International Paper Company. For several years he was connected with the engineering department at Rumford, Me., but the greater part of his time was devoted to his position as plant engineer and manager of that division. In 1936 he accepted a position with the Union Bag and Paper Company as manager but in 1937 he resigned to take the post as production engineer with the Sandy Hill Iron and Brass Works. Other changes announced are the promotion of Foster P. Doan to plant manager; Ernest C. Waters, superintendent; Loren G. Gallup, supervisor of planning; Frank E. Pasco, supervisor of purchases; Arthur Langlois, supervisor of welding department and plant maintenance; Maxie Daniels, supervisor of erection; Millard Hayes, chief draftsman, and Clayton Howe, shop foreman.

B. C. Paper Production in 1943

Pulp and paper production in the province of British Columbia during the year 1943 was valued at $25,597,000 as compared with $27,457,000 in 1942 and $27,723,000 in 1941. 1941 and 1942 were peak years however, as the previous high mark was $22,971,000 in 1940. The ten year average production value from 1934 to 1943 was $18,675,000. Pulp woods exported from the province during 1943 reached a value of $16,000 as compared with $2,000 valuation in 1942. The ten year average in pulp wood exports was $11,000.

News print production in British Columbia last year was 211,696 tons as compared with 252,559 tons in 1942, 275,788 tons in 1941 and 262,144 tons in 1940. The ten year average production for newsprint was 241,638 tons.

Production of other types of paper in British Columbia which rose steadily from 1937 to 1942 showed a slight drop last year with a total of 63,026 tons. Productions in some of the previous years were 74,915 tons in 1942, 75,453 tons in 1941, 68,428 tons in 1940, 50,870 tons in 1939, and 39,348 tons in 1938. The ten year average production was 52,384 tons.

These figures were revealed in the report of the Forest Branch of the Department of Lands of the Province of British Columbia and were compiled under the direction of C. D. Orchard, Chief Forester.

FOR *Better* RESULTS TRY WITCO'S NO. 11

WITCO CARBON BLACK NO. 11 is a dustless, cleaner carbon black that disperses readily and evenly to impart a deep, rich tone to your black papers. It is more economical... gives finer, more uniform results and may be placed directly in the beater without removal from the bag. Avail yourself of this opportunity to improve and reduce the cost of your black papers. Write for samples today.

WITCO CHEMICAL COMPANY

MANUFACTURERS AND EXPORTERS

[Formerly Wishnick-Tumpeer, Inc.]

295 MADISON AVENUE, NEW YORK 17, NEW YORK • *Boston* • *Chicago* • *Detroit* • *Cleveland* • *Akron* • *London*

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending June 10, 1944

STOCKS

	High	Low	Last
A. P. W.	3	2⅞	2⅞
Armstrong Cork Co.	41½	40½	41¼
Celotex Corp.	13½	12¼	13¾
Celotex Corp., pf.	17¾	17½	17½
Certain-Teed Products Corp.	5¾	5½	5⅝
Certain-Teed Products Corp., pf.	64	62½	63
Champion Paper & Fibre Co.	24¾	24¾	24¾
Champion Paper & Fibre Co., pf.	113	111½	111½
Congoleum Nairn Co.	24⅝	24½	24½
Container Corp. of America	24⅞	23¾	24⅞
Continental-Diamond Fibre Co.	11	10⅛	11
Crown-Zellerbach Co.	17⅜	16⅞	17⅜
Crown-Zellerbach Co., pf.	100	99¼	100
Dixie Cup Co.	16½	16⅜	16⅜
Dixie Cup Co.—A	46⅜	45	45
Flintkote Co.	22⅜	21½	22
Flintkote Co., pf.	105¾	105¾	105¾
Robert Gair	3¾	3⅜	3¾
Robert Gair, pf.	14½	14½	14½
International Paper Co.	17	15⅞	16½
International Paper Co., pf.	82	79¼	80
Johns-Manville Corp.	95	92⅞	93
Johns-Manville Corp., pf.	..	..	..
Kimberly-Clark Corp.	..	..	..
Mac Andrews & Forbes	27¼	27	27¼
Mac Andrews & Forbes, pf.	..	..	..
Masonite Corp.	47¾	45½	47¾
Mead Corp.	9¾	9	9¾
Mead Corp., pf. A-6%	..	..	..
Mead Corp., pf. B-5½%	81	81	81
National Container Corp.	17⅜	16⅜	16⅜
Paraffine Companies, Inc.	55	54	54½
Paraffine Companies, Inc., pf.	105¼	105¼	105¼
Rayonier, Inc.	15	14½	15
Rayonier, Inc., pf.	31	30¼	31
Ruberoid Co.	30¼	29¼	29¾
Scott Paper Co.	40⅜	39½	39½
Scott Paper Co., pf.	..	..	..
Sutherland Paper Co.	31	30½	30½
Union Bag & Paper Corp.	11⅛	10½	11⅛
United Paperboard Co.	5	5	5
U. S. Gypsum Co.	77	74¼	77
U. S. Gypsum Co., pf.	175	174	175
West Virginia Pulp & Paper Co.	22¼	20¼	20¼
West Virginia Pulp & Paper Co., pf.	107	107	107

BONDS

Abitibi Pulp & Paper Co. 5s '53	78	77½	77⅞
Celotex Corp. 3¾s '55	..	..	..
Certain-Teed Products Corp. 5½s '48	104¼	101⅛	101¼
Champion Paper & Fibre Co. 4¾s '50	..	..	..
International Paper Co. 6s '55	108	107⅝	107⅝
International Paper Co. 5s '47	104	103⅝	103⅝
Mead Corp. 3½s '53	..	..	..
West Virginia Pulp & Paper Co. 3s '54	..	..	..

New York Curb Exchange

High, Low and Last for Week Ending June 10, 1944

STOCKS

	High	Low	Last
Great Northern Paper Co.	35	34	34¼
Hummel-Ross Fibre Corp.	5⅜	5½	5½
St. Regis Paper Co.	4⅞	4½	4⅝
St. Regis Paper Co., pf.	157	155	155
Taggart Corp.	5⅝	5⅝	5⅝

BONDS

American Writing Paper Co. 6s '61	100¼	100¼	100¼

Market Guide for Latin America

The new, fully revised 1944 edition of the Market Guide for Latin America has just been distributed, according to recent announcement of its publisher, American Foreign Credit Underwriters Corporation of 170 Broadway, New York.

This is the 22nd annual revised edition of the Market Guide, often referred to as the "red book of Latin American trade" and the "Exporter's Bible." This year's edition lists and rates more than 65,000 manufacturers, merchants, distributors, importers and exporters, sales representatives, etc., in all the countries of South and Central America, Mexico, Cuba, Puerta Rico and the West Indies. Besides full firm name, address and line of business, each listing carries both credit and capital ratings, providing both the sales and credit departments of exporting organizations with immediately available data regarding their Latin American trade. A trade classification simplifies the selection of buyers in individual industries or trades. Names on the U. S. Blacklist are indicated by special symbol. The separate trade list section lists leading industries, transport services, utilities, etc. General information pages contain a wealth of factual information, such as agency and distributing centers, sales terms, monetary units, customs regulations, banks, and banking towns, nearest seaports and other facts needed in export marketing and credit work. The Market Guide is available from publisher on subscription basis with monthly supplements and auxiliary services which keep the contents revised.

Commercial Timbers of the United States

The McGraw-Hill Book Company has just published Commercial Timbers of the United States—Their Structure, Identification, Properties and Uses by H. P. Brown of the New York State College of Forestry and A. J. Paushin of Michigan State College. This book was formerly published under the title Identification of the Commercial Timbers of the United States, now out of print. It is one of the American Forestry Series edited by Walter Mulford.

The first nine chapters tells the story of wood in narrative form covering the plant origin of wood, development of the tree, wood evaluation and identification, the woody plant cell, cambia, and the structure of woods, Chapter 10 gives miscellaneous information on wood such as grain, wood defects and figures. A key is given for the identification of the more important woods of the United States based on minute features. The book 554 pages (6½ x 9) is amply illustrated and contains an excellent glossary and index.

Says Mr. Mulford "Forestry should be scientific at every point at which a scientific basis is available. The scientific basis should be strengthened through research as rapidly as possible. But it will be a long time before forestry is truly scientific, and even then it will probably be like agriculture, a meeting ground of sciences rather than a science itself.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York 17, N. Y. at $5.00 per copy.

Robt. Gair Co. Votes Dividend

At a meeting of the Board of Directors of Robert Gair Company, Inc., a quarterly dividend of 30 cents per share in respect to the second quarter of the year 1944 was declared upon the preferred stock of the par value of $20 per share of the Company, payable June 30, 1944 to stockholders of record at the close of business June 16, 1944, without the closing of the transfer books.

Union Bag Earns 33 Cents

The Union Bag and Paper Corporation for the first quarter of 1944 reports net income, after provision for taxes, amounted to $423,236, equivalent to 33 cents per share on the outstanding capital stock, compared with a deficit of $188,074 in the first quarter of 1943.

Fraser Companies Net $1.90

The Fraser Companies, Ltd. for 1943 report a net profit of $706,679, or $1.90 a share, compared with $335,368, or 90 cents a share for 1942.

JOINT PRINTING COMMITTEE OPENS PAPER BIDS

(Continued from page 7)

Ground Wood Writing, White and Colored

No. 50—500,000 lbs., white, No. 32; flat, cut any size, min. width 28 ins., max. width 48 ins.

Marquette Paper Co. .....
(400,000 lbs. only) 6.40c

No. 51—1,000,000 lbs. white, No. 36; flat, cut any size, min. width 28 ins., max. width 48 ins.

Frank Parsons Paper Co. .....
(300,000 lbs. only) 6.40c
Barton, Duer & Koch Paper Co.
(500,000 lbs. only) 6.40c

No. 52—180,000 lbs. Blue, buff, green, pink, salmon and yellow, No. 36; flat, cut any size, min. width 28 ins., max. width 48 ins.

No bid.

Chemical Wood Writing, White and Colored

No. 55—1,500,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Whitaker Paper Co. .....
(1,100,000 lbs. Lots 55, 56, 57 and 58) 7.69c
Barton, Duer & Koch Paper Co.
(Lots 55, 56, 57, 58) 7.80c
Marquette Paper Co. 7.85c

No. 56—3,000,000 lbs., white No. 36; flat, cut any size, min. width 21 ins., max. width 48 ins.

R. P. Andrews Paper Co. .....
(1,000,000 lbs. only) 7.29c
Whitaker Paper Co. .....
(1,100,000 lbs. Lots 55, 56, 57, 58) 7.44c
Barton, Duer & Koch Paper Co...
(500,000 lbs. only — Lots 55, 56, 57, 58) 7.25c

No. 57—1,000,000 lbs., white, No. 32; rolls, min. width 16 ins., max. width 48 ins. (3-inch fiber cores).

Whitaker Paper Co. .....
(1,100,000 lbs. only—Lots 55, 56, 57, 58) 7.09c
Barton, Duer & Koch Paper Co.
(500,000 lbs. — Lots 55, 56, 57, 58) 7.50c
Stanford Paper Co. .....
(500,000 lbs. only) 7.63c
Marquette Paper Co. 7.61c

No. 58—1,000,000 lbs., white, No. 36; rolls, min. width 16 ins., max. width 48 ins. (3-inch fiber cores).

R. P. Andrews Paper Co. .....
(500,000 lbs. only) 6.99c
Whitaker Paper Co. .....
(1,100,000 lbs. only — Lots 55, 56, 57, 58) 7.09c
Barton, Duer & Koch Paper Co.
(500,000 lbs. only — Lots 55, 56, 57, 58) 7.00c

No. 59—1,000,000 lbs., blue, buff, green, pink, salmon and yellow Nos. 32 and 36; flat cut any size, min. width 21 ins., max. width 48 ins. Min. order, one color, 10,000 lbs.

Marquette Paper Corp. .....
(Substance 32) 8.54c
(Substance 36) 8.09c

High Wet Strength Map

No. 63—1,750,000 lbs., No. 48; flat, cut 30x48, 30x50, 36x50, 36x54 ins.; the grain to run lengthwise of the sheet.

Paper Corp. of U.S. .....
(500,000 lbs. only) 13.75c

50 Per Cent Lithograph-Finish Map

No. 64—150,000 lbs., Nos. 32 and 40; flat, cut any size, min. width 22 ins., max. width, 48 ins., the grain to run lengthwise of the sheet.

Virginia Paper Co. .....
(50,000 lbs. only) 15.80c
Barton, Duer & Koch Paper Co. 15.50c
Aetna Paper Co. .....
(No. 32) 16.53c
(No. 40) 15.53c
Stanford Paper Co. .....
(No. 32) 16.50c
(No. 40) 15.50c

No. 65—250,000 lbs., Nos. 48 and 56; flat, cut any size, min. width 22 ins., max. width, 48 ins., the grain to run lengthwise of the sheet.

Stanford Paper Co. .....
(No. 48) 15.40c
(No. 56) 15.30c

50% White Chart, Lithograph-Finish

No. 68—1,000,000 lbs. No. 72; flat, cut any size, min. width 22 ins., max. width 46 ins.; the grain to run lengthwise of the sheet unless otherwise specified.

Franklin Research Co. 19.425c

100% White Chart, Lithograph-Finish

No. 70—15,000 lbs. Nos. 83 and 96; flat, cut any size, min. width 22 ins., max. width 46 ins.; the grain to run lengthwise of the sheet unless otherwise specified.

Paper Corp. of U.S. 22.65c
Birmingham & Prosser 27.60c
Barton, Duer & Koch Paper Co. 23.00c

Chemical Wood Manifold, White and Colored

No. 71—600,000 lbs., white, No. 18; flat, cut 21x32, and 32x42 ins.; the grain to run 21-inch and 42-inch ways.

Old Dominion Paper Co. .....
(200,000 lbs. only) 12.489c
Cauthorne Paper Co. .....
(200,000 lbs. only) 9.95c
Graham Paper Co. .....
(100,000 lbs. only) 9.95c

No. 73—200,000 lbs., blue, green, pink, and yellow, No. 18; flat, cut 21x32 22x34, 28x34, 32x42, and 34x44 ins.; the grain to run the 21-inch and 42-inch ways. Min. order, one color 5,000 lbs.

Graham Paper Co. .....
(100,000 lbs. only) 11.05c

50 Per Cent Manifold, White and Colored

No. 76—80,000 lbs., white, No. 18; flat, cut 21x32, 22x34, 28x34, 32x42, and 34x44 ins.; the grain to run the 21-inch and 42-inch ways.

Barton, Duer & Koch Paper Co. 18.00c
Old Dominion Paper Co. .....
(50,000 lbs. only) 17.979c
(30,000 lbs. only) 18.479c
Stanford Paper Co. 19.50c

No. 78—130,000 lbs., blue, cherry, green, pink, salmon and yellow, No. 18; flat cut 21x32, 22x34, 28x34, and 34x44 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 5,000 lbs.

R. P. Andrews Paper Co. .....
(40,000 lbs. only) 21.10c
Barton Duer & Koch Paper Co. 18.40c
Old Dominion Paper Co. .....
(50,000 lbs. only) 18.229c
(50,000 lbs. only) 18.739c
(30,000 lbs. only) 19.229c

Chemical Wood Bond, White and Colored

No. 101—80,000 lbs., white, No. 26; flat, cut any size, min. width 21 ins.; max. width 38 ins.

Eastern Corp. 11.46c

No. 102—120,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins.; max. width 38 ins.

Eastern Corp. 9.30c

No. 103—120,000 lbs., blue, No. 32; flat, cut 32x42 ins.

Eastern Corp. 10.04c

No. 104—40,000 lbs., blue, buff, green, pink, salmon, and yellow No. 26; flat cut any size min. width 21 ins., max. width 38 ins. Min. order, one color, 5,000 lbs.

Eastern Corp. 12.36c

25 Per Cent Bond, White and Colored

No. 105—80,000 lbs., white, No. 26; flat, cut any size, min. width 21 ins.; max. width 48 ins.

Whitaker Paper Co. 15.15c
Aetna Paper Co. 16.33c

No. 106—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Whitaker Paper Co. .....
(75,000 lbs. only) 13.86c
(75,000 lbs. only) 14.55c
Barton, Duer & Koch Paper Co.
180,000 lbs. only) 14.55c
Aetna Paper Co. .....
(1,200,000 lbs. only — Lots 106, 107, 108) 14.33c

No. 107—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Whitaker Paper Co. .....
(75,000 lbs. only) 13.86c
(75,000 lbs. only) 14.55c
Aetna Paper Co. .....
(1,200,000 lbs. only — Lots 106, 107, 108) 14.33c

No. 108—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Whitaker Paper Co. .....
(75,000 lbs. only) 13.86c
(75,000 lbs. only) 14.55c
Aetna Paper Co. .....
(1,200,000 lbs. only — Lots 106, 107, 108) 14.33c

No. 110—120,000 lbs., blue, buff, cherry, green, pink, salmon and yellow No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Aetna Paper Co. 14.63c

Chemical Wood White Ledger

No. 151—400,000 lbs., No. 48, flat, cut any size, min. width 17 ins., max. width 48 ins.

Willcox-Walker-Furlong Co. ... 8.28c
Cauthorne Paper Co. .....
(200,000 lbs. only) 8.26c
Eastern Corp. 9.60c

No. 152—80,000 lbs., No. 56; flat, cut any size, min. width 17 ins., max. width 48 ins.

Willcox-Walker-Furlong Co. 8.28c
Eastern Corp. 9.60c

No. 153—100,000 lbs., No. 48; rolls, 34 and 48 ins. wide (3-inch fiber cores).

Willcox-Walker-Furlong Co. 7.78c
Cauthorne Paper Co. 8.01c
Eastern Corp. 9.36c

25 Per Cent Ledger, White and Colored

No. 154—300,000 lbs., white, No. 48; flat, cut 22x34, 24x38, 28x34, 32x42 and 34x44 ins. Min. order, one substance, 5,000 lbs.

Aetna Paper Co. .....
(200,000 lbs. only) 14.37c

No. 155—200,000 lbs., white, No. 56; flat, cut 22x34, 24x38, 28x34, 32x42 and 34x44 ins. Min. order, 5,000 lbs.

Aetna Paper Co. .....
(100,000 lbs. only) 14.37c

Chemical Wood White and Colored Index

No. 183—120,000 lbs., white, 22½x28½—148; flat, cut any size, min. width 17 ins., max. width 42 ins.
Willcox-Walker-Furlong Co. 7.99c

No. 184—200,000 lbs., white, 22½x28½—182 and 230; flat, cut 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 10,000 lbs.
Willcox-Walker-Furlong Co. 7.99c
Whitaker Paper Co. 7.67c

50 Per Cent Index, White and Colored

No. 189—100,000 lbs., white, 22½x28½—148; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, 10,000 lbs.
R. P. Andrews Paper Co. 16.07c
Whitaker Paper Co. 14.42c
Barton, Duer & Koch Paper Co. 12.83c
Walker-Goulard, Phlen Co. ....
(10,000 lbs. only) 15.90c
(20,000 lbs. only) 15.75c
(30,000 lbs. only) 15.60c
(50,000 lbs. only) 15.50c

No. 190—200,000 lbs., white, 22½x28½—182 and 230; flat, cut 24x38, 28x34, 32½x42, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 10,000 lbs.
Barton, Duer & Koch Paper Co. 13.83c
Walker-Goulard, Phlen Co. ....
(10,000 lbs. only) 15.90c
(20,000 lbs. only) 15.65c
(30,000 lbs. only) 15.50c
(50,000 lbs. only) 15.40c
(100,000 lbs. only) 15.30c

No. 191—200,000 lbs., blue, buff, cherry, fawn green pink, salmon and yellow, 22½x28½—182 and 230; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight 5,000 lbs.
Barton, Duer & Koch Paper Co. 14.58c

No. 192—125,000 lbs., blue, buff, cherry, fawn, green, pink salmon and yellow 22½x28½—148; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, 5,000 lbs.
R. P. Andrews Paper Co. 16.77c
Barton, Duer & Koch Paper Co. 13.96c

100 Per Cent White Index

No. 196—60,000 lbs., 22½x28½—approximately 206; flat, cut 20½x30½ and 34½x44 ins.
R. P. Andrews Paper Co. 25.70c
Paper Corp of U.S. 24.80c
Barton, Duer & Koch Paper Co. 21.50c
Stanford Paper Co. 25.50c

Coated Cover, White and Colored

No. 201—40,000 lbs., white, 20x26—120; flat, 26½x41 ins., the grain to run lengthwise of the sheet. Min. order, 5,000 lbs.
No bid.

No. 202—15,000 lbs., India tint and light green, 20x26—100; flat, 26¼x41 ins. Min. order, 5,000 lbs.
No bid.

Antique-Finish Cover, White and Colored

No. 203—150,000 lbs., antique; white, blue, buff, dawn, quaker drab, terra cotta, gray, brown, green, gobelin blue, granite, tea and yellow; flat, 19½x25¼—95, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 5,000 lbs.
R. P. Andrews Paper Co. 8.74c
Whitaker Paper Co. .....
(100,000 lbs. only) 8.64c

50 Per Cent Laid Cover, Colored

No. 205—100,000 lbs., blue, cream, white, gray and green, 20x26—130; flat, cut 19½x25¼ and 28x41 ins., with projecting colored-paper marker between each 500 sheets. Min. order, one color, 2,000 lbs.
R. P. Andrews Paper Co. 13.07c

Wood Manila

No. 209—200,000 lbs., 24x36—80 and 100; rolls, 21 and 36 ins. wide (3-inch fiber cores).
Frank Parsons Paper Co. 4.75c
Bulkley-Dunton Co. 4.75c

No. 210—40,000 lbs., 24x36—120; rolls, 18-ins. diameter, 4¾, 5¾, and 7½ ins. wide, wound on wooden plugs, 1½-in. hole.
Whitaker Paper Co. .....
4¾ inch rolls) 5.875c
(5¾ inch & 7½ inch rolls) 5.625c

Chemical Wood Manila

No. 211—100,000 lbs., 24x36—140 and 160; flat, cut any size. Min. order, one weight, 5,000 lbs.
Perkins-Goodwin Co. 10.50c

No. 2 Kraft

No. 217—100,000 lbs., 24x36—80 to 160; flat, cut any size, in wrapped bundles.
No bid.

High-Finish Chemical Wood Manila Tag

No. 271—40,000 lbs., 24x36—280; flat, cut any size, min. width 24 ins., max. width 38 ins.
Perkins-Goodwin Co. 7.25c

Calendered Tag, Manila and Colored

No. 276—500,000 lbs., manila, 22½x28½—150; rolls, 23¼ and 26½ ins. wide (6-inch fiber cores with metal tips).
Barton, Duer & Koch Paper Co. 8.50c

No. 277—100,000 lbs., blue, brown, green, ivory, pink, red, salmon and yellow 22½x28½—150; rolls 23¼ and 26½ ins. wide (6-inch fiber cores with metal tips). Min. order one color, 10,000 lbs.
Barton, Duer & Koch Paper Co. 9.50c

Jute Tag

No. 280—80,000 lbs., 22½x28½—200 and 280; flat, cut 28x38 ins. Min. order, one weight, 10,000 lbs.
Perkins-Goodwin Co. 12.00c
Mudge Paper Co. 10.50c

Railroad Board, White and Colored

No. 302—35,000 sheets, white, flat, 22x34 ins., 4-ply, each 100 sheets fully banded. Min. order, 10,000 sheets.
Barton, Duer & Koch Paper Co.
per M sheets $34.38
Old Dominion Paper Co. .....
per M sheets $38.18
Stanford Paper Co. .....
per M sheets $34.38

No. 305—30,000 sheets, ash gray, green, orange and red, flat, 22x34 ins., 4-ply each 100 sheets fully banded. Min. order, one color, 5,000 sheets.
Barton, Duer & Koch Paper Co.
per M sheets $42.79
Old Dominion Paper Co. .....
per M sheets $42.82
Stanford Paper Co. .....
per M sheets $43.04

Wood Bristol, Colored

No. 306—120,000 lbs., 22½x28½—150; rolls, 20 ins. wide (6-inch iron cores).
No bid.

No. 307—120,000 lbs., 22½x28½—150; flat, cut 32x42 ins.
Barton, Duer & Koch Paper Co. 6.79c

United States Postal Card Bristol

No. 325—1,000,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins. in diameter and 33 ins. wide, 36 ins. in diameter (6-inch iron cores).
R. P. Andrews Paper Co. .....
(total 1,500,000 lbs. only — Lots 325, 326, 327) 6.17c
Whitaker Paper Co. .....
(total 1,000,000 lbs. only) 6.15c

No. 326—1,000,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins. in diameter and 33 ins. wide 36 ins. in diameter (6-inch iron cores).
R. P. Andrews Paper Co. .....
(total 1,500,000 lbs. only — Lots 325, 326, 327) 6.17c
Whitaker Paper Co. .....
(total 1,000,000 lbs. only) 6.19c

No. 327—1,000,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins. in diameter, 33 ins. wide and 36 ins. in diameter (6-inch iron cores).
R. P. Andrews Paper Co. .....
(total 1,500,00 lbs. only — Lots 325, 326, 327) 6.17c
Whitaker Paper Co. .....
(total 1,000,000 lbs. only) 6.22c

Pressboard, Colored

No. 351—60,000 sheets, red, flat, 24x32 ins., thickness .0140 inch. Min. order, 5,000 sheets.
R. P. Andrews Paper Co. .....
per C sheets $7.15
Resolute Paper Products Corp...
per C sheets $7.59
Whitaker Paper Co. .....
per C sheets $7.04
Barton, Duer & Koch Paper Co.
per C sheets $7.75
Mathers-Lamm Paper Co. .....
per C sheets $7.53

No. 352—50,000 sheets, gray, flat, 30x36 ins., thickness .0300 inch. Min. order, 5,000 sheets.
R. P. Andrews Paper Co. .....
per C sheets $23.59
Resolute Paper Products Corp...
per C sheets $23.93
Whitaker Paper Co. .....
per C sheets $22.70
Barton, Duer & Koch Paper Co.
per C sheets $18.85
Mathers-Lamm Paper Co. .....
per C sheets $24.20

News Board

No. 360—300,000 lbs., 26x38 ins., No. 100, flat, cut any size, min. 21 x 32 ins., max. 40x52½ ins. (to be trimmed square on four sides).
No bid.

Binder's Board, No. 1 Quality

No. 366—200,000 lbs., flat, to trim 25x30 ins., Nos. 16, 18, 20, 25 30 and 40.
Mathers-Lamm Paper Co. 4.165c

Binder's Board Best Quality

No. 368—20,000 lbs., flat, to trim 20x30 ins., and 22x28 ins., Nos. 18, 20, 25, 30, 35, 40 and 45. Min. order, 5,000 lbs.
Consolidated Paper Co. 5.87c

Chestnut Cover Board

No. 369—40,000 lbs., flat, to trim 25x30 ins. Nos. 17, 19, 21, 25, 31 and 41.
Mead Sales Co. 3.90c

Expects No Cut in Newsprint Quotas

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1944—Barring unforeseen contingencies, United States newspaper publishers, during the third calendar quarter will be permitted consumption quotas of newsprint based on the present sliding scale of cuts, Arthur R. Treanor, director of the War Production Board's Printing and Publishing Division, told members of the Newspaper Industry Advisory Committee meeting in Washington today.

"However," he added, "additional pulp and paper may be required for military use in the fourth quarter, and no one can predict what effect that would have on the supply available for the newspaper industry."

Figures presented by the Newspaper Section of WPB indicated that the total newspaper publishers' allowable usage in the third quarter would be 655,207 tons, as compared with an over-all use of newsprint of 743,000 tons by newspapers, weeklies, commercial printing concerns and Government agencies. Estimates for the fourth quarter to meet allowable newspaper usage were placed at 779,831 tons under the present scale of restrictions, against the over-all newsprint allowable usage of 867,000 tons.

The Advisory Committee recommended that United States newspaper publishers be permitted to purchase, but not to use beyond their established "allowable usage," as much Canadian newsprint as the Canadian mills can manufacture and deliver.

The committee further recommended that requests for additional print paper quota to cover the political conventions in Chicago and for additional tonnage to aid in publicizing the Fifth War Bond Drive be denied.

To Maintain Newsprint Output

Canada expects to be able to continue the current rate of pulpwood consumption through the third quarter of 1944, barring unforeseen conditions and other influencing factors, Guy E. Hoult, Administrator of Newsprint for Canada, told members of the War Production Board Newspaper Industry Advisory Committee last week. Both wood pulp and 32-pound newsprint can therefore be delivered to U. S. mills and newspaper publishers in the third quarter on the basis established the first half of the year, he said.

Delivery of pulpwood already cut in Canada to the Canadian mills is dependent largely upon water conditions. Due to adverse weather conditions and a dry spring it is difficult to tell now what amount of pulpwood can be delivered, Mr. Hoult explained, adding that by late summer definite information would be available.

Discussing the 30-pound newsprint being manufactured as an experiment, he pointed out an over-all loss in production of 7.5% compared to production of the standard 32-pound paper. Results of May production of 30-pound paper, however, indicated that between 185,000 and 188,000 tons of mixed weights of newsprint per month could be manufactured for delivery to U. S. publishers, as against 200,000 tons of 32-pound paper, he said.

A committee of U. S. newspaper publishers will visit Canada on June 20 and 21 to meet Canadian manufacturers of newsprint, Mr. Arthur R. Treanor, Government Presiding Officer of the advisory committee, said. He said that shortly he would appoint several members of the advisory committee and several others as members of the special committee to go to Canada. At that time a full study of all the facts and factors involved in the manufacture and use of 30-pound newsprint compared with 32-pound would be made by the committee. It will report its recommendations to the WPB and the industry.

Harold Boeschenstein, Acting Director of the WPB Forest Products Bureau, told the members of the advisory committee that the WPB would appreciate advice from the industry on the "long haul" use of 30-and 32-pound paper, after the experimental period had passed and after the special committee to meet with the Canadians, reports.

"In the supply situation," he said, "we are confronted with a pretty serious condition although production is increasing somewhat." Reporting that the requirements for many types of papers and of paperboard for packaging military and other products moved up in almost direct proportion to increased production of many items, Mr. Boeschenstein said that it should be re-emphasized that there are no reserve inventories to fall back upon and therefore any conditions, such as weather, strikes, or transportation delays, which adversely effect production of wood or collection of waste paper, will be reflected in a reduction in paper and paper products available for consumption.

May Newsprint Statistics

Production of newsprint in Canada during May 1944 amounted to 262,467 tons and shipments to 276,054 tons, according to the News Print Service Bureau. Production in the United States was 60,909 tons and shipments 62,319 tons. The output in Newfoundland was 23,828 tons and shipments were 12,842 tons making a total North American production of 347,204 tons and shipments of 351,215 tons. Total production in May 1943 was 339,132 tons and shipments were 338,454 tons. There was one working day more in May 1944 than in May 1943.

The Canadian mills produced 47,750 tons more in the first five months of 1944 than in the first five months of 1943, which was an increase of four percent. The output in the United States was 51,263 tons or fifteen percent less than in the first five months of 1943; in Newfoundland production was 32,323 tons or forty-four and six tenths percent more, making a net increase of 28,810 tons, or one and eight tenths percent more than in the first five months of 1943.

Stocks of newsprint paper at the end of May were 97,377 tons at Canadian mills, 6,916 tons at United States mills, and 56,543 tons at Newfoundland mills, making a combined total of 160,836 tons compared with 164,847 tons on April 30, 1944, and 166,199 tons at the end of May 1943.

Goes with General American Process

Roman Chelminski, formerly associated with the European activities of the Dorr Company, Inc. and Oliver United Filters, Inc. and other licensors of the Dorr Company, Inc. and more recently member of the Eastern Sales Division of the Dorr Company, Inc., has joined the staff of the General American Process Equipment.

He will be an assistant to Dr. C. L. Knowles, Technical Director, and will be located at 420 Lexington avenue, New York City.

Sorg Paper Co. Changes

At a special meeting of the board of directors of the Sorg Paper Company, Middletown, Ohio, held on Wednesday, May 31 J. A. Aull was elected chairman of the board, a newly-created office, and D. G. Driscoll was elected president, both changes to take effect June 1, 1944. There are no other changes in the officers of the company.

Mr. Aull has been associated with the company since 1908, serving as vice president and director of the Paul A. Sorg Paper Company, the predecessor company, from January 7, 1908 to February 24, 1914, and president and director of the predecessor and present company from February 24, 1914 to June 1, 1944. Prior to his association with the company, he had made a name for himself as general agent for the Denny Estate in Pittsburgh.

Following are the major changes and additions since Mr. Aull became associated with the company:

In 1908, the old Sorg Machine Room was replaced with a new three-story building, and a new Fourdrinier paper machine was installed. In 1917, The W. B. Oglesby Paper Company was purchased. In 1923, The Frank Smith Paper Company was built. In 1927, the present power plant was constructed. In 1931, The Paul A. Sorg Paper Company, the W. B. Oglesby Paper Company, the Frank Smith Paper Company and the Paul A. Sorg Realty Company were merged to form The Sorg Paper Company. From May 12, 1936 to late in 1940, the Sorg Paper Company operated the Superior Lawrence Bag Division. In July, 1941, the Vancouver Kraft Corporation's pulp mill at Port Mellon, British Columbia, was purchased.

Mr. Aull has always been interested and active in civic affairs. He was vice president and director of the old Chamber of Commerce, which, in 1923, became the Civic Association, of which he was vice president for many years. He was an active member of the committee which was responsible for the erection of the Hotel Manchester. From 1922 to 1932, he served as trustee of the Middletown Hospital Association. Since 1907, he has been continuously identified with the First-American Bank and Trust Company and its predecessors, and, within the past year, became chairman of that institution's board after more than twenty-seven years as its president. He is vice president and director of the American Seating Company, Grand Rapids, Mich., president and director of the Berwin Paper Corporation, Dansville, N. Y., vice president and director of the Foundation Investment Company of Cincinnati, and director of the Ail Transfer Company of New York.

Mr. Driscoll, Mr. Aull's successor as president of The Sorg Paper Company, was born in St. Paul, Minn., in 1897. Immediately upon graduation from the Sheffield Scientific School of Yale University in 1920, he became associated with the company and was elected secretary and director in 1927. From the time of his employment in 1920 until 1938, at which time he was elected executive vice president, he was in the purchasing and sales departments. He has served as executive vice president since 1938. In addition to his duties with the Sorg Paper Company, Mr. Driscoll has for some time served as a member of the War Production Board's Wood Pulp Allocation Industry Advisory Committee and Overall Paper Industry Advisory Committee in Washington.

Mr. Driscoll also is serving as chairman of the local Committee for Economic Development, whose function it is to plan for maximum production and employment for the post-war period. For several years, he served as a director of the Y.M.C.A., and still retains a keen interest in its affairs.

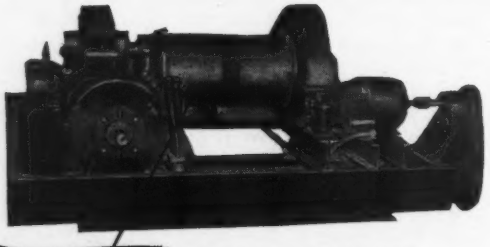
Mr. Driscoll has also for several years been industrial vice chairman of the American Red Cross Fund Campaign.

M. & O. Elects Officers

All officers and directors of Minnesota and Ontario Paper Company were re-elected at meetings held May 22 of both the stockholders and the board of directors.

The officers are: R. H. M. Robinson, president; R. W. Andrews, senior vice president; C. T. McMurray, vice-president; R. J. Henderson, vice president; R. D. Main, secretary and treasurer; and Frank J. Hickling, comptroller.

The board of directors include: J. B. Faegre, Shirley S. Ford, C. T. Jaffray and R. H. M. Robinson, all of Minneapolis; Frank M. Gordon, Chicago, Ill.; Serge Semenenko, Boston, Mass.; Charles S. Garland, Baltimore, Md., and Canadian directors include: George A. Dobbie, Galt, Ontario, and Robert S. Waldie, Toronto, Canada.



SAVE TWO WAYS WITH READING UNIT CRANE DESIGN

You save two ways with Reading unit crane design... lower first cost and lower maintenance cost. The flexibility of unit design enables Reading to engineer a crane tailored exactly to your needs, without any special engineering or design costs. Interchangeable mounting dimensions and gear ratios give a flexibility to meet changes in conditions after installation with a minimum of expense.

Reading unit design has located all of the operating parts so that they are accessible and may be removed for overhaul or repair individually without disturbing other units. This saves, because it makes inspection and maintenance quicker and easier. For details write for "The Why and How of Faster Production."

READING CHAIN HOISTS-ELECTRIC HOISTS OVERHEAD TRAVELING CRANES

READING CHAIN & BLOCK CORP. 2113 ADAMS ST., READING, PA.

Louis W. Sutherland Gets LL.D.

Mayor Louis W. Sutherland of Kalamazoo, Mich., received the honorary degree of Doctor of Laws (LL.D.) at the 108th annual commencement exercises at Kalamazoo College June 12, 1944. The honor was conferred in recognition of his worth as a leading citizen of his community, a cultured gentleman of great humanitarian interests, and a successful business man in local and national affairs.

Mr. Sutherland was elected to the Kalamazoo College Board of Trustees in 1926 and since then has been most active and influential. A charter member of the Kalamazoo College Associates, he has twice served as chairman of the College Improvement Fund and at present is chairman of the Athletic Field Development Committee.

His many friends in the paper industry know Mr. Sutherland as the chairman of the board of directors of the Sutherland Paper Company, a business which he founded in 1917. The original company has grown to an organization of 2500 employees, producing paperboard and a widely diversified line of packages and specialties.

New Type of Raft for Logging

A type of log raft which, if successful, will make available for logging hundreds of stands of timber on exposed coasts, has been invented by Louis Joseph Tansky, well known Vancouver Island logger, who has been operating on the Pacific Coast for 27 years, and is familiar with all aspects of logging.

Called the Dryland log raft, it does away with the necessity of booming logs where there is any danger from storms, tides or currents. Hundreds of thousands of dollars in damage are suffered annually by B.C. companies either through direct loss of logs at booming grounds or through having to hold logs in salt water until favorable time for towing them away, thus exposing them to teredo action.

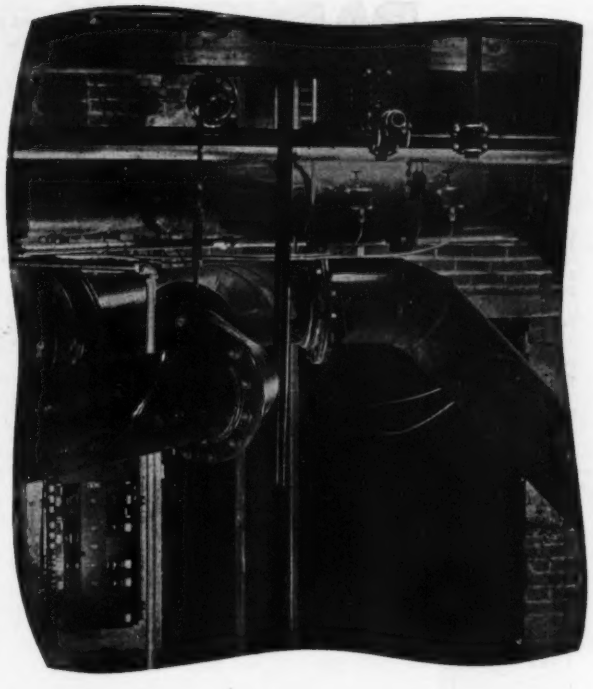
Mr. Tansby, who has patented his device, intends to build a raft to handle his own logs.

The Dryland log raft is built on similar principles to the Davis raft, except that it is on a cradle-and-slipways ashore and may be launched into the sea just like a ship whenever weather and tides suit. Tansky's model contains more than 500,000 feet.

Newfoundland Makes Less Paper

Drastically reduced supplies of pulpwood and the inability to obtain a sufficient number of wood-cutters made 1943 the worst in years for Newfoundland's two pulp and paper companies, according to a report to the Department of Commerce. Neither company was able to attain capacity production during the year and one company was forced to close down its sulphite mill in September. Valiant efforts were made to hold expenditures down to a minimum and both companies tried to diversify their products which now include newsprint, dry-baled sulphite, groundwood corrugating board and various kinds of wrapping paper.

Production in 1943 showed decreases in all items. Newsprint production dropped off to 239,903 short tons from 281,263 tons in 1942. Sulphite amounted to 47,385 short tons in 1943 compared with 86,964 tons in 1942 and the output of groundwood pulp fell sharply to 38,420 short tons from the 113,736 tons produced in 1942.



IT PAYS TO SPECIFY

ARMCO "Spiral Welded"

Whether your plans call for wartime repairs or a peacetime modernizing program, pipe dollars go farther when you specify ARMCO "Spiral Welded." Both first cost and maintenance are low. This is why:

Every section of ARMCO Spiral Welded Pipe is prefabricated for *your* layout. Piping is easy to install because fittings come welded to straight pipe runs. And this means fewer flanges, fewer joints—less chance for leaks. ARMCO Pipe is smooth inside for high flow capacity. It's easy to keep clean too.

Diameters range from 6 to 36 inches; wall thicknesses from 7/64 to 1/2-inch. Write us about your piping problems. Just address The American Rolling Mill Co., 1041 Curtis St., Middletown, O.

EXPORT: THE ARMCO INTERNATIONAL CORPORATION.

ARMCO Spiral Welded Pipe

SPECIFY ARMCO SPIRAL WELDED PIPE UNDER THESE A.S.T.M. DESIGNATIONS

Sizes 6 in. to 24 in. Wall .109 in. to .172 in.	A.S.T.M. Designation: A211
Sizes 6 in. to 30 in. Wall .109 in. to .312 in.	A.S.T.M. Designation: A139
Sizes 30 in. to 36 in. Wall .250 in. to .500 in.	A.S.T.M. Designation: A134

PAPER
TRADE JOURNAL
Title Reg. U. S. Pat. Off.
Henry J. Berger, Editor

COMING EVENTS IN PAPER INDUSTRY

New England Section. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

Delaware Valley Section. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

Lake States Section. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

Kalamazoo Valley Section. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

Chicago Professional Paper Group—First Monday of each month except July and August at Chicago, Ill.

PAPER BOARD OUTPUT

Paper board output has been maintained at a relatively high ratio since the peak reached in the latter part of March 1943. The trend since March 1944 has been upward and for the week ended April 22 production of all types of paper board was at the annual rate of 9,304,672 tons, compared with 8,588,836 tons in 1943, with 7,773,968 tons in 1942, and with 8,400,000 tons in 1941. Container board comprised the greater part of the over-all production. The minimum tonnage of container board, of which 625,032 tons of wood pulp was authorized, in the second quarter of 1944 was set at 1,110,798 tons; folding boxboard, 507,555 tons; setup boxboard, 189,315 tons, and cardboard, 15,472 tons.

In its latest report on paper board production, the Department of Commerce states: Of the total of 112,567 tons of wood pulp authorized for use in the manufacture of folding boxboard, approximately 75,000 tons were authorized for production of folding boxboard from solid pulp and the remainder for the production of other types of fiber boxboard. A total of 5,710 tons of wood pulp was authorized for the production of hot drink cup stock in order to meet Army and Navy requirements, as compared with 4,561 tons for the fourth quarter of 1943. The allocations of wood pulp for the production of milk bottle stock were reduced to 16,776 tons from 18,548 tons for the first quarter of 1944. The minimum of 1,110,798 tons of container board compared with 1,029,000 tons produced in the first quarter. Military requirements for container board continue to increase and take precedence over civilian requirements so that no easing of the civilian paekaging situation can be anticipated during the current quarter of the year. Military requirements for V-board in the second quarter of 1944 are now more than 100,000 tons greater than during the last quarter of 1943.

In commenting on the new restrictive order, the Department says in part: To direct the available supply of board into products for most essential uses amendments to Limitation Order L-317 have been suggested which will, it is believed, result in wider compliance with the order and will increase the number and kinds of products in Schedule A. Similar action has been taken by an Interpretation to Conservation Order M-290, issued April 12, 1944, which emphasizes that any person who requires container board for any purpose whatever is prohibited from accepting delivery without the specific written authority of the War Production Board. An amendment to the order exempts from its purview any container board product which is defined as a "fiber shipping container" in Order P. 146.

In its latest release on May 29, 1944, the War Production Board stated in part: "Although 1944 carton production is expected to be the largest in history, the current demand for new shipping cartons for off-shore and domestic movement of goods is substantially greater than the supply. This shortage is due largely to the enormous military program for V-boxes, used in increasing quantities to supply our armed forces overseas. Only an order by curtailment of home demand can prevent serious dislocations in civilian distribution. Fiber Shipping Container Order L-317, amended to assure a fairer distribution of the home economy's tight carton supply, alters existing quotas only in occasional details, but establishes new carton quotas for products previously unlimited in carton use. Previous controls represent a 3% cut in demand. New controls will total an additional 22% and achieve an approximate supply-demand balance.

In commenting on the effect of the new limitation order, Harold Boeschenstein, Acting Director of the Forest Products Bureau of the War Production Board said in part: "Increased carton control should not slow the movement of goods, but tend to accelerate it. Under the present system, many shippers are unable to buy cartons due to competition for the available quantity. Under the amended order, with the demand pared down to supply, every shipper should obtain his assigned percentage if there is full cooperation from all container users. Teamwork will assure success of the widespread quota system."

In further commenting on the restrictive nature of L-317, the Department's report points out that, since paper board of all types is in critically short supply, control over the available supply had to be undertaken. In this connection a series of conservation and limitation orders regulating both the manufacture and use of available paper board has been issued to direct it to essential uses and make a fair division of this valuable commodity.. To complement these orders, a technical study is now being made by the Paper Board Division of all types of fiber shipping containers, folding cartons, setup boxes, and other paper board products, to ascertain if many of them could be made of lighter weight board without endangering their value as merchandise containers.

The Department explains restrictions to manufacturers as follows: Hereafter, no person may use solid fiber container equipment to manufacture anything but V-boxes when unfilled orders therefor are in hand. This action as taken by the WPB on April

24, through issuance of Direction 2 to Conservation Order M-290, to insure timely production of V-boxes and reduce excessive backlog orders for solid fiber shipping containers. Now, manufacturers of this type of container must use their solid fiber production equipment to the fullest extent to fill V-box orders on hand, regardless of preference ratings on any other orders for solid fiber shipping containers. Formerly, all solid fiber box orders, whether in V-grade or for domestic use, were run on the basis of the preference rating on the order, which indicated its essentiality.

Appeals for relief under the new order, L-317, will be granted only in exceptional cases, the WPB said. That agency also said that nothing in the amended Order L-317 changes new carton ratings as assigned under the rating Order P-146. It does, however, provide for the first time that users must certify to their suppliers that they are purchasing containers in accordance with existing orders. The new WPB Order M-378, issued June 8, 1944, replaces Conservation Order M-241 in the control of the manufacture of paper board, but control of nonbending cardboards and pressboards remains within the scope of the Order-241. Reserve monthly production under Order M-378 is reduced from 45 to 40% of the manufacturer's average monthly production.

K. E. Tozier Now First Sergeant

BOSTON, Mass., June 12, 1944—K. E. Tozier, head of The K. E. Tozier Company, merchants of plain and fancy papers for the paper box trade, is now First Sergeant in the Air Forces at Orlando, Fla.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1944		Corresponding Weeks—1943	
April 29	90.9	May 1	85.8
May 6	91.5	May 8	90.6
May 13	89.6	May 15	91.1
May 20	91.6	May 22	92.2
May 27	91.7	May 29	91.8
June 3	88.3	June 5	84.7

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1943	87.2	88.9	89.5	88.7	91.4	84.8	84.3
1944	89.6	89.6	90.1	89.5	90.9	...	...

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1943	91.0	88.3	89.6	89.6	82.0	87.8

COMPARATIVE YEARLY SUMMARIES

	1937	1938	1939	1940	1941	1942	1943	1944
Year to Date..	89.3	67.6	79.8	86.4	92.6	100.8	88.9	90.2
Year Average.	79.8	71.5	83.4	85.6	97.4	90.4	87.8	...

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS †

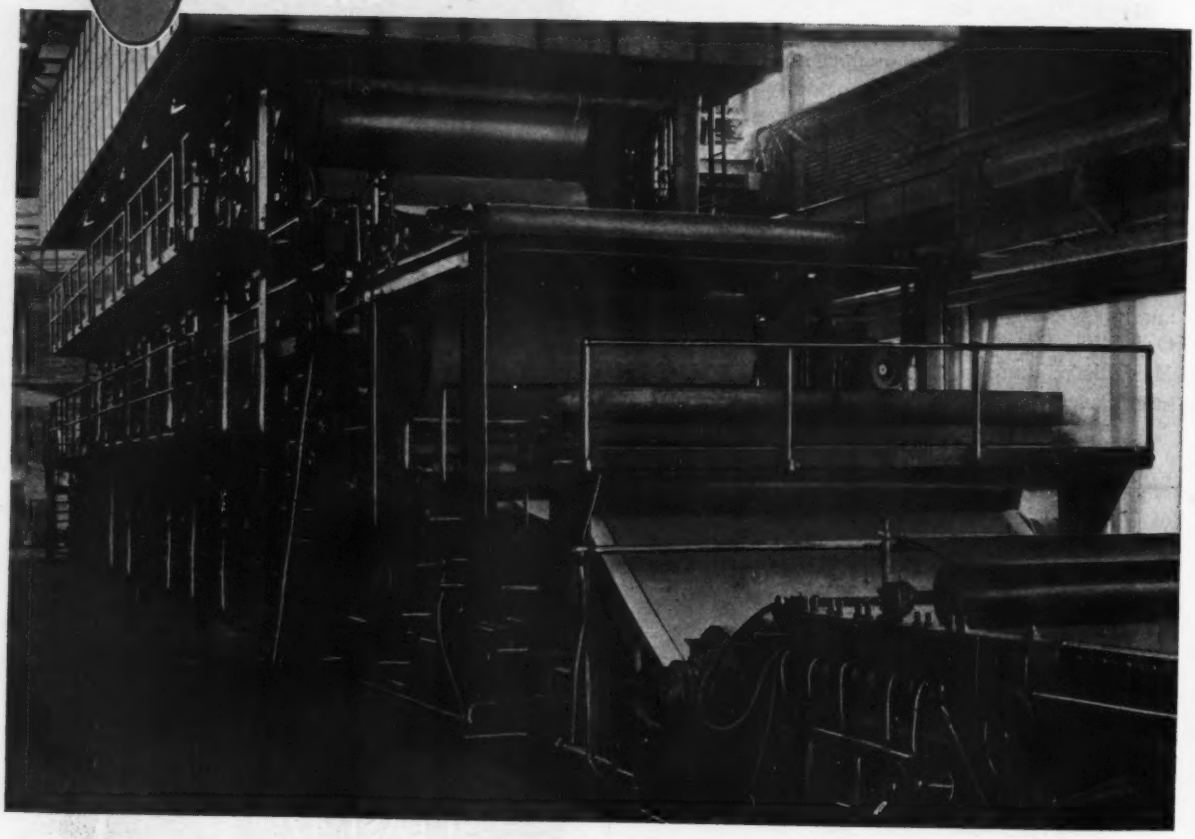
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1938	56	63	63	60	60	59	59	69	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	83	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	93	87	93
1944	90	96	95	96	96	..	..	..	..	..	..	..	..

Week ending April 29, 1944—98
Week ending May 6, 1944—98
Week ending May 13, 1944—95
Week ending May 20, 1944—97
Week ending May 27, 1944—96
Week ending June 3, 1944—93

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

PARSONS
AND
WHITTEMORE
INCORPORATED
10 EAST 40TH ST.
NEW YORK CITY
WOOD PULP
PAPER
• • •
LYDDON
& COMPANY
(AMERICA) INC.
51 EAST 42ND ST.
NEW YORK CITY
EXPORTERS OF
AMERICAN PULP
TO BRITAIN, SOUTH
AMERICA AND ALL
OTHER WORLD
MARKETS

CORRECT Lubrication means Better Maintenance



CORRECT lubrication makes for better maintenance by preventing excessive wear.

Sinclair STEAM CYLINDER and VALVE OILS are designed for *correct* engine lubrication under all operating conditions. Sinclair also provides specialized lubricants for rolls, calenders, gear units, chain drives, and bearings.

Where continuous heavy duty operation threatens excessive wear and overhaul shutdown there is a lubrication problem. Consult us about it.

(Write for "The Service Factor" — published periodically and devoted to the solution of lubricating problems.)

SINCLAIR INDUSTRIAL OILS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N. Y.

Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
122 E. 42nd St., New York 17, N. Y.
Edited by R. G. Macdonald, Secretary

Water Resistance of Paper and Paperboard

(Dry-Indicator Method)

Revision of TAPPI Official Standard T 433 m-41

This method is based on the dry-indicator method of Carson *(3, 4, 5, 6)* and modifications of it developed by the TAPPI Paper Testing Subcommittee on Water Resistance under the direction of Abrams *(2)* and Codwise *(7, 8, 9)*. It consists in bringing one side of the test specimen in contact with water and finding the time required for the water to pass through the specimen, as indicated by the development of color in an indicator powder consisting of a mixture of water-soluble dye, sugar, and starch. The sugar serves the two-fold purpose of masking the color of the particles of dye as long as they are dry, and of absorbing the transuded moisture and holding it in close proximity to the dye. The starch increases the stability of the mixture.

Apparatus

1. Any form of apparatus for applying the test may be used which fulfills the following conditions: (1) one surface of the specimen is wetted uniformly at the moment the count of time is begun; (2) the indicator on the opposite surface is continuously visible; (3) no moisture reaches the indicator except that which passes through the specimen from the wetted surface; (4) no moisture which does so reach the indicator escapes from contact with it. The following apparatus has been found suitable for testing paper and paperboards:

(a) For specimens having a high degree of water resistance, a vessel of water of sufficient area for floating several specimens simultaneously, immersed in a water bath with which the temperature of the water in the vessel can be maintained at 23 ± 0.5°C; a sealing medium prepared by melting together and mixing thoroughly equal parts of beeswax and rosin; a medicine dropper.

(b) For specimens that require a very short time to test, such that an edge seal is not required, the float arrangement *(5)* shown in Fig. 1 will facilitate the test. It is made of a thin-walled aluminum pan about 5 inches in diameter and 1 inch high with a hole 2 inches in diameter cut in the bottom. The surface

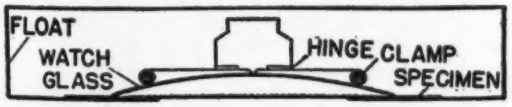


FIG. 1
Cross Section of Float

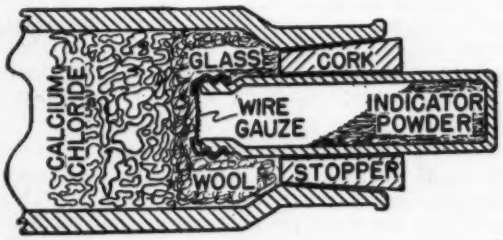


FIG. 2
Longitudinal Section Showing Construction of Desiccator and Shaker

is coated with paraffin or beeswax to make it more water-repellent. The watch glass is clamped over the specimen by means of a wire-frame clamp hinged at one side and fastened under a spring at the opposite side. In the absence of the float such papers can be supported by a hollow cylinder having the upper end barely submerged under the surface of the water in a suitable vessel, while the watch glass is placed over the indicator. Such a cylinder may also be found useful in supporting an occasional paper whose surface is so easily wetted that it would be difficult to float it unsupported when prepared as shown in Fig. 1.

2. *Shaker and desiccator* for the indicator as shown in Fig. 2. The shaker is prepared from a 10-ml. screw-top vial by cutting away most of the metal of the flat portion of the top, fitting a 70-mesh wire screen inside the top, and screwing it back in place. The desiccator is made of a small wide-mouthed bottle containing anhydrous calcium chloride covered with a layer of glass wool. A hole is bored in the cork stopper just large enough to admit the shaker. The bottle remains on its side and the vial is inserted through the hole with the screened end inside. The assembly is kept in the usual type of laboratory desiccator when not in use.

3. *Watch glasses,* 2 inches in diameter.

4. *Stop watch.*

Reagents

A. *Indicator.* The water-transudation indicator is composed of pure, powdered cane sugar, pure soluble starch, and methyl violet dye (Du Pont N. E. methyl violet, National Aniline and Chemical Co. 2 B. P. methyl violet, or equivalent). Pass each ingredient separately through a No. 100 screen, and completely

dry it in a desiccator over anhydrous $CaCl_2$ before making the mixture. When dry, weigh, and mix the following proportions by weight:

Sugar	45
Soluble starch	5
Dye	1

Mix the ingredients by screening repeatedly through a No. 60 screen until the mixture is uniform. Keep the indicator in a desiccator when it is not being used. (The prepared indicator may be obtained from the M. Ames Chemical Works, Inc., 21 Rogers Street, Glens Falls, N. Y.

Note: The powdered sugar may be prepared by grinding granulated or "domino" sugar. Confectioners' sugar must not be used, as it contains starch.

B. *Water.* Water of fair purity, such as the usual drinking water, is suitable.

Test Specimen

The test specimens shall be cut from different portions of the test sample in such a way as to be thoroughly representative of it. They shall be free from folds, wrinkles, or other blemishes not commonly inherent in the material. A convenient size is about 2.5 inches square. The specimens shall be conditioned for testing according to TAPPI Standard T 402 m.

Procedure

The tests shall be made in the atmospheric conditions specified in TAPPI Standard T 402 m. During the tests the water used for testing shall be maintained at 23 ± 0.5°C.

Place the test specimen on a level, smooth surface, and sprinkle the indicator on the specimen by gently tapping the inverted shaker until a thin, even layer is formed, avoiding either a very sparse covering or one in which the powder is piled up. In the former case, the color change produced by too few dye particles may be insufficient to attract attention, unless they are exposed for a longer time than the proper end point. When the powder is placed on too thickly, the upper layer may obscure changes in that in contact with the paper. Also the greater total quantity of powder may require more time to change since it would necessitate more moisture to affect all the dye. Handle the test specimen with care once the powder is applied, for jarring or excessive tipping may cause rearrangement of the particles of powder, which then tend to form in clusters, thus destroying the intimate contact and uniform thin layer that is desirable. As soon as the application of the layer of the indicator powder is completed, cover it with a 2-inch watch glass and keep it covered during the test.

FIG. 3

Method of Preparing the Specimen Showing the Watch Glass Being Sealed Over the Indicator Powder

In testing material having a high degree of water resistance, use the apparatus designated for the purpose. First seal the edges of the specimen to prevent water from entering through the edges and reaching the indicator without going entirely through the material. Grasp the specimen with thumb and forefinger as a pivot and dip into melted beeswax-rosin mixture to a depth of ⅛ inch; rotate 90 degrees and dip the next edge; and repeat until all four edges are saturated and sealed. When the wax is hardened, add the indicator powder as described, seal the watch glass over it with melted beeswax-rosin, using a medicine dropper as illustrated in Fig. 3, then float the specimen on the water. For papers having a short testing period it is generally not necessary to seal the cover glass; the float shown in Fig. 1 may be used or the specimen and cover glass may be supported by a submerged cylinder.

In placing the specimen in the water, make contact with the water at a slight angle to avoid trapping air bubbles that might cause uneven wetting of the specimen. When testing materials having uneven surfaces, wet with water the surface to be in contact with water, using a soft brush, immediately before placing the specimen in the water. Examine each specimen after the test, and if there is evidence of uneven wetting, discard the test result.

Measure the time interval from the instant of contact of the test specimen with water until the rate of change in the color of the indicator is at a maximum. In testing materials having a low degree of water resistance, this time interval is conveniently determined as the means of the values corresponding to the development of pronounced color in one fourth and in three fourths of the area covered by the indicator. For materials of this kind on which the color develops uniformly over the whole area, it may be necessary to tabulate the values of the time interval against the intensity of the color to determine the maximum rate of change. In judging the end point on specimens requiring considerable time to reach the end point, it may be helpful to note the following three general color phases: The powder as it is first sprinkled on the test area often shows a slight tinge of color other than the predominant white. This first color may appear slightly different on surfaces of different color. After the test has been in progress for such a time that the end point is reached, a more intense color is present and is a somewhat reddish purple. Finally, if the sample is left for a longer time than the proper end point, the reddish cast tends to disappear and the powder appears a dark purple; also, the particles often appear as if quite moist. Sometimes when the specimens are unevenly resistant, there may be hints of two or possibly all three phases at once, but it should be easily ascertainable which is predominant. In any case, taking the first

hint of change from the white should be avoided; allow enough change to take place to be positive. On the other hand, do not wait for the last purple phase for once it is attained there is little further change to note with the passage of time. Artificial light, when used for viewing the test specimen, should be reasonably brilliant but completely shaded from the eyes. The light should be applied to one side of the specimen (thus avoiding reflection from the cover glass) and the eye should view from the side next to the illuminant, to avoid interference of shadows cast by the indicator particles with the judgment of the color.

Make at least five tests from each side of the material, except that asphalted fabric-lined papers shall be tested with the fabric side only in contact with the water.

Report

The report shall give the average, the minimum, and the maximum values of the time of transudation in minutes or hours from each of the two sides of the material. For ordinary papers designate the sides as wire side and felt side when they can be differentiated; otherwise, use a suitable code designation as Side I and Side II, or when there is an obvious difference between the sides, such as Side I, coated, and Side II, uncoated. The side designated shall be that which was in contact with the water.

Precision

The reproducibility of the average test results by experienced operators is within 10 to 15%.

Additional Information

1. This method is sometimes not applicable to materials containing large amounts of water-soluble components.

2. Penescope *(1)*.—This device can be used for the dry-indicator test. It consists of a cast brass chamber which is filled with water; a hollow screw cap, with an opening for observaion of the test specimen, in which the test specimen is inserted and then screwed tightly against the chamber; and pipe connections at top and bottom of the chamber by means of which the water can be introduced, maintained at a desired level, and removed. The suitability of this device for a given purpose should be determined by comparing the results obtained with it with those obtained by the standard method.

3. Related TAPPI Methods.—T 431 m, Ink Absorption of Blotting Paper; T 432 m, Water Absorption of Bibulous Paper; T 441 m, Water Absorptiveness of Nonbibulous Paper and Paperboard.

4. Investigations of the use of high temperatures (up to the boiling point of water) in the dry-indicator test have shown that, in general, there is good correlation between transudation time and temperature. For products that show such relation, the use of hot water is of value in shortening the test period, and in some instances in making the end point more distinct *(10, 11)*.

Literature Cited

1. Abrams, A., *Paper Trade J.* 84, No. 3: 44-47; *TS* 38-41 (Jan. 20, 1927).
2. Abrams, A., *Tech. Assoc. Papers* 12: 49 (1929); *Paper Trade J.* 88, No. 9: 40-42; *TS* 147-149 (Feb. 28, 1929).
3. Carson, F. T., *Tech. Assoc. Papers* 8: 91 (1925); *Paper Trade J.* 80, No. 10: 59-62; *TS* 85-88 (March 5, 1925).
4. Carson, F. T., U. S. Bureau of Standards *Technologic Paper* No. 326 (Sept., 1926).
5. Carson, F. T., and Worthington, V., *Paper Trade J.* 95, No. 16: 34-36; *TS* 188-190 (Oct. 20, 1932).
6. Carson, F. T., *Paper Trade J.* 98, No. 21: 36-38; *TS* 264-266 (May 24, 1934).
7. Codwise, P. W., *Tech. Assoc. Papers* 14: 175 (1931); *Paper Trade J.* 92, No. 10: 55-57; *TS* 138-140 (March 5, 1931).
8. Codwise, P. W., *Tech. Assoc. Papers* 15: 234 (1932); *Paper Trade J.* 94, No. 5: 42-45; *TS* 46-49 (Feb. 4, 1932).
9. Codwise, P. W., *Tech. Assoc. Papers* 17: 143-145 (1934); *Paper Trade J.* 98, No. 10: 43-45; *TS* 123-125 (March 8, 1934).
10. Codwise, P. W., *Tech. Assoc. Papers* 26, 165 (1943); *Paper Trade J.* 116, No. 9: 30-33; *TS* 90-93 (March 4, 1943).
11. Mullen, E. G., *Paper Trade J.* (in press).

United States Patents on Papermaking

First Quarter, 1944

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI

The following lists of patents has been compiled from the current numbers of the Official Gazette of the United States Patent Office. Because, as a rule, only one claim is published in the Gazette, it is not claimed that the list is complete; also, it is possible that the list may contain some patents which do not apply to pulp and paper manufacture.

Copies of any of the following patents may be obtained from the U. S. Patent Office, Washington, D. C., by sending ten cents for each patent desired. The number of the patent, the name of the inventor, and the title of the patent should be given in the request. Personal checks and postage stamps are not accepted in payment for patents. Books of coupons may be purchased for two or ten dollars, good for 20 or 100 patents. Coupon orders do not have to be accompanied by letters of transmittal.

January 4, 1944

2,338,129. Method of determining the rate of drying of coatings. Howard R. Moore, Drexel Hill, Pa. Filed Dec. 19, 1941. 1 claim. (Cl. 73-51).

2,338,132. Wrapping paper cutting and feeding mechanism. Oscar Sandberg, assignor to Lynch Manufacturing Corporation, Defiance, Ohio. Filed Feb. 17, 1942. 11 claims. (Cl. 164-68). Means for cutting and feeding wrappers to a wrapping machine.

2,338,136. Log barker and cleaner. Ernest C. Shaw and William G. Hagmaier, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Filed Aug. 3, 1940. 6 claims. (Cl. 144-208).

2,338,138. Gluing mechanism for box-making machines. George S. Sillars, assignor to Hoague-Sprague Corporation, Lynn, Mass. Filed Feb. 12, 1943. 11 claims. (Cl. 91-51).

2,338,254. Valve bag. Bernard T. Miller, assignor to St. Regis Paper Company, New York, N. Y. Filed Nov. 23, 1940. 5 claims. (Cl. 229-62.5). A bag made of a plurality of paper; one of the end flaps has a transverse slit through its outer portion.

2,338,260. Carton, including pouring means. William A. Ringler, assignor to The Gardner-Richardson Company, Middletown, Ohio. Filed July 24, 1941. 11 claims. (Cl. 229-17).

2,338,261. Means for cutting and coating cardboard or other sheet material. Louis Roth, Forest Hills, N. Y. Filed Sept. 23, 1940. 2 claims. (Cl. 91-14).

2,338,338. Stiffness testing device. Herbert M. Kieckhefer, assignor to Kieckhefer Container Company, Delair, N. J. Filed Dec. 5, 1942. 2 claims. (Cl. 265-14).

2,338,383. Combined abrasive pulpifier and washing apparatus. Ernest Theodore McGregor, Vancouver, British Columbia, Canada. Filed Feb. 13, 1941. 1 claim. (Cl. 92-20). An apparatus for the disintegration of wet, lap, sheet pulp, and waste paper stock, and the separation and washing away any and all matter foreign to the stock.

2,338,457. Process for preparing starch products. Meindert D. Rozenbroek, Delden, Netherlands; vested in the Alien Property Custodian. Filed Dec. 15, 1939. 2 claims. (Cl. 127-33). A method for preparing soluble starch consists in treating it with sodium hypochlorite formed in situ (sodium carbonate and chlorine at a temperature below 60° C.).

2,338,465. Suction roll. Edward T. Street, assignor to Downingtown Manufacturing Company, Downingtown, Pa. Filed June 9, 1939. 4 claims. (Cl. 92-53). A suction roll has a suction box so constructed that the suction in the roll may act to actually lift the water drawn from the paper web or felt with which the suction roll is engaged through a considerable distance and at a high vertical angle.

2,338,503. Control system for paper machines. William H. Formhals, assignor to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Filed Jan. 2, 1943. 10 claims. (Cl. 92-73). An apparatus is described for preventing the so-called "sag back" of paper in front of the 1st drier roll set in event of breakage of the paper in front of the calender roll set. A generator means is provided intermediate the direct current drive motor for the calender rolls and a dynamo connected to the last set of drier rolls, which is responsive to the operating conditions of the calender drive motor.

2,338,602. Fabrication of wet-strengthened papers. Milton O. Schur, assignor to Reconstruction Finance Corporation, Washington, D. C. Filed Dec. 4, 1939. 12 claims. (Cl.

92-21). A reaction product of urea and formaldehyde in aqueous solution (before it has reached the gel stage) is incorporated into a paper furnish prior to the formation of a web therefrom, and forming paper from the furnish under acid conditions.

2,338,619. Method and apparatus for treating fibrous material. Stanislaus Bogaty, assignor to Proctor & Schwartz, Incorporated, Philadelphia, Pa. Filed July 5, 1940. 10 claims. (Cl. 34-33). The object of the patent is to create a wave-like alternating compressive and expensive action in the stock by directing sheet-like streams of air downwardly against the stock in transverse planes perpendicular to the material.

2,338,635. Glue applicator roll. Harry Galber, assignor to I. F. Laucks, Inc., Seattle, Wash. Filed May 9, 1942. 5 claims. (Cl. 91-67.8).

2,338,685. Process of bending grainless lignocellulose fiberboard. Herbert C. Dee, Chicago, Ill. Filed May 16, 1938. 3 claims. (Cl. 18-56). A liquid containing water is applied to the board at a temperature materially below the boiling point to increase its moisture content, the board is bent, and then dried by pressing it between heated bending dies.

January 11, 1944

2,338,705. Cap. Edward J. Costa and Victor A. Ryan, assignors to Crown Cork & Seal Company, Inc., Baltimore, Md. Filed Nov. 7, 1941. 2 claims. (Cl. 215-39). A cushion liner for a crown cap consists of a paperboard comprising ligneous untreated mechanical paper fibers in major amount and in less amount raw chemically untreated nonligneous vegetable fibers; the liner is 0.031 to 0.056 inch in thickness.

2,338,710. Method of treating fibrous web material. Lloyd L. Dodge, assignor to National Paper and Chemical Company, Wausau, Wis. Filed Dec. 11, 1939. 3 claims. (Cl. 117-156). A wet paper web is treated with a coating of an aqueous dispersion of a protein, paraffin wax, a plasticizer and a methylene-containing hardening agent; on heating the web is rendered stronger and more moisture-, grease- and gasproof.

2,338,777. Suction roll. William H. Millspaugh, Catawba Island, Ohio. Filed Jan. 5, 1939. 6 claims. (Cl. 92-53). A suction roll is proposed for removing water at the nip by receiving and evacuating the water as expressed, which permits of greater pressures being applied to the top roll.

2,338,813. Method of manufacturing sound deadening material. Otto W. Hueter, assignor to Mitchell & Smith, Inc., Detroit, Mich. Filed March 25, 1940. 2 claims. (Cl. 92-55). A method of manufacturing slabs from mineral wool clusters with a liquid starch binder.

2,338,862. Container. Raymond E. MacDonald, Westwood, Mass., assignor of one-half to Edwin M. Warwick. Filed March 13, 1940. 1 claim. (Cl. 229-2.5).

2,338,904. Apparatus for screening paper pulp. Edwin Cowles, assignor to The Cowles Company, Princeton, N. J. Filed April 11, 1940. 3 claims. (Cl. 92-32). Means are claimed for vibrating the screen element magnetically and an improved means for supporting the screen, thus giving improved screening efficiency and better accessibility for cleaning and repairing the screen.

2,339,008. Coating machine. Wiltie I. Gladfelter and Walter A. Ehrlich, assignors to Crown Cork & Seal Company, Inc., Baltimore, Md. Filed Nov. 27, 1940. 26 claims. (Cl. 91-45). A can coating machine.

2,339,012. Cellulose solution and a process of preparing such solution. Otto Hecht, Ludwigshafen - on - the - Rhine, and Ernst Gassenmeier, Mannheim, Germany; vested in the Alien Property Custodian. Filed Aug. 20, 1940. 15 claims. (Cl. 106-203). A solution contains cellulose and a quaternary pyrrolidinium hydroxide dissolved in a solvent selected from water, alcohols and mixtures thereof.

2,339,068. Paper sack. Pedro A. Frixione, San Martin, Argentina. Filed Nov. 30, 1942. 5 claims. (Cl. 229-55). A grain bag.

2,339,070. Sheet decurling apparatus. Lynn O. Hayes, assignor to F. L. Smithe Machine Co., Inc., New York, N. Y. Filed Oct. 24, 1941. 16 claims. (Cl. 93-61). The apparatus consists of a decurling member and a guide member engaging opposite sides of a traveling sheet, arranged to bend the sheet across the decurling member and an adjusting construction for varying the spacing of the decurling member and the guide member in the direction of sheet travel.

2,339,071. Sheet decurling apparatus. Lynn O. Hayes, assignor to F. L. Smithe Machine Co., Inc., New York, N. Y. Filed Oct. 24, 1941. 9 claims. (Cl. 93-61). Registering decurling members are located on opposite sides of the path of a traveling sheet.

2,339,176. Carton for bottles. George N. Lee, assignor to Brett Lithographing Co., Long Island City, N. Y. Filed April 7, 1941. 4 claims. (Cl. 229-28).

2,339,224. Carton. Frank C. Shina, assignor to United Paperboard Company, New York, N. Y. Filed Dec. 10, 1940. 5 claims. (Cl. 229-39).

January 18, 1944

2,339,242. Coated sheet material. Allen Abrams, George W. Forcey and Charles L. Wagner, assignors to Marathon Paper Mills Company, Rothschild, Wis. Filed Aug. 2, 1940. 5 claims. (Cl. 117-146). A coated sheet material suitable for packaging molten food materials comprises a sheet material coated with a hot-melt composition comprising a mixture of 6-50% of a wax-compatible film-forming constituent (rubber, gutta percha, isobutylene polymers, etc.) and 94-50% of paraffin wax and an amorphous wax.

2,339,304. Sealed bag and process for making same. Victor A. von Haase, Rocky River, Ohio. Filed Sept. 30, 1940. 12 claims. Cl. 93-35).

2,339,305. Packaging method. Charley L. Wagner, assignor to Marathon Paper Mills Company, Rothschild, Wis. Filed April 16, 1942. 5 claims. (Cl. 99-178). A method of wrapping plastic cheese.

2,339,326. Cellulosic product. Charles A. Fourness and John B. Catlin, assignors to Paper Patents Company, Neenah, Wis. Filed June 19, 1940. 7 claims. (Cl. 154-54). A multi-ply, relatively dense, expansible pad or bat.

2,339,382. Carton. Bruce J. Davidson, assignor to National Biscuit Company, New York, N. Y. Filed July 31, 1940. 2 claims. (Cl. 229-35).

2,339,445. Carton. Lloyd Wynne and Earl C. Potter, assignors to Wm. Wrigley Jr. Company, Chicago, Ill. Filed March 3, 1941. 2 claims. (Cl. 229-34).

2,339,446. Creped pressure - sensitive adhesive material. Paul F. Ziegler and Karl C. Hoeglund, assignors to The Kendall Company, Boston, Mass. Filed Aug. 2, 1940. 3 claims. (Cl. 154-43).

2,339,453. Method of treating fibrous pulp. George L. Bidwell, assignor to Riegel Paper Corporation, New York, N. Y. Filed June 26, 1940. 2 claims. (Cl. 210-199). In dewatering stock a round cylinder of relatively small diameter is completely submerged in the pulp and is provided with a facing of wire netting. As the stock circulates in the trough and the cylinder rotates, the stock forms a mat on the exterior of the cylinder and a portion of the water contained in the stock passes through the facing into the cylinder and thence to a drain.

2,339,500. Flexible backed abrasive article and method of making the same. Harry C. Martin, assignor to The Carborundum Company, Niagara Falls, N. Y. Filed Feb. 13, 194.. Eleven Claims.. (Cl. 51-195). The backing is a layer of laminated paperboard.

2,339,594. Bleaching clay. Ira Williams, assignor to Sgoda Corporation, Huber, Ga. Filed March 20, 1941. 12 claims. (Cl. 23-110). A clay slip is bleached under acidic conditions with a water-soluble hydrosulfurous compound at 50-100° C.

2,339,595. Process of bleaching clay. Ira Williams and Nathan Millman, assignors to Sgoda Corporation, Huber, Ga. Filed Aug. 5, 1941. 19 claims. (Cl. 23-110). A clay slip is bleached with a pre-formed water-soluble metal salt of hydrosulfurous acid and powdered zinc.

2,339,656. Box. Frank C. Shina assignor to United Paperboard Company, New York, N. Y. Filed May 29, 1942. 7 claims. (Cl. 229-44).

2,339,665. Container. Samuel Alman, assignor to Eastern Paper Box Company, Inc., Boston, Mass. Filed March 17, 1941. 1 claim. (Cl. 229-14). Means for packaging liquid and the like to preserve initial temperature conditions.

2,339,707. Method for coating paper. Otto Kress and Charles E. Johnson, assignor to The Institute of Paper Chemistry, Appleton, Wis. Filed Dec. 13, 1939. 2 claims. (Cl. 106-142). Brightening and opacifying paper by treating a preformed paper web with an aqueous emulsion consisting essentially of kerosene, ammonium oleate, and an alkaline dispersion of casein, subjecting the treated web to a drying treatment to evaporate the liquid material and leave the casein on the surface of the web in submicroscopic particle size.

2,339,711. Papermaking machine. Donald V. Lowe, John W. Vedder and Charles S. Adams, assignors to Rice Barton Corporation, Worcester, Mass. Filed April 4, 1940. 4 claims. (Cl. 92-43). A cylinder mold has a rotatable cylindrical screen arranged to receive a coating of pulp and transfer it to an endless felt.

2,339,730. Paper stock flow valve regulating mechanism. John W. Vedder and Everett W. Clem, assignor to Rice Barton Corporation, Worcester, Mass. Filed Jan. 20, 1942. 10 claims. (Cl. 92-43). A stock flow regulating mechanism is claimed which permits a localized control of the stock flow as well as the regulation of the method and manner of stock flow and the quantity that flows to the machine.

January 25, 1944

2,339,943. Free - flowing barium carbonate and method of making same. James B. Pierce, Jr., The First National Bank of Tampa, executor. Filed Feb. 29, 1940. 7 claims. (Cl. 23-66). A precipitated barium carbonate, the particles of which are partially calcined at 300-450° C.

2,339,998. Method and apparatus for recovering chemicals of sulphate paper pulp. Norman A. Lewthwaite, assignor to Crown Zellerbach Corporation, San Francisco, Calif. Filed July 19, 1940. 2 claims. (Cl. 210-199). A method of efficient recovery of the chemicals from black liquor by the use of only a single rotary vacuum filter.

2,340,103. Apparatus for making tissue type paper. Earl E. Berry, assignor to Beloit Iron Works, Beloit, Wis. Filed Dec. 9, 1940. 3 claims. (Cl. 92-49). The patent covers especially an inverted pick-up felt machine disposed between the forming part and the drier section of a papermaking machine.

2,340,127. Process of slitting and coating. Karl R. Karlson, assignor to Union Bag & Paper Corporation, New York, N. Y. Filed May 26, 1941. 2 claims. (Cl. 117-4). A method of slitting and then coating a web with a thermoplastic material.

2,340,154. Recovery of chemical from the waste heat boiler system of chemical recovery units. Cedric A. Stone and George M. Trostel, assignors to Combustion Engineering Company, Inc., New York, N. Y. Filed Oct. 30, 1940. 10 claims. (Cl. 23-262). A system for recovering chemical and deriving heat from black liquor.

2,340,229. Container. James G. Shakman, assignor to Pabst Brewing Company, Chicago, Ill. Filed Aug. 24, 1939. 1 claim. (Cl. 229-44).

2,340,269. Sheave device for draping Fourdrinier wire. John A. Hoover, assignor to West Virginia Pulp and Paper Company, New York, N. Y. Filed May 30, 1942. 1 claim. (Cl. 242-85). A pulley or sheave device for facilitating change of wire on a Fourdrinier machine.

February 1, 1944

2,340,290. Tubular bag making machine. Edward E. West, Richmond, Va. Filed July 17, 1940. 19 claims. (Cl. 112-63).

2,340,338. Coating composition. John D. Murray, Chicago, Ill. Filed Sept. 23, 1939. 9 claims. (Cl. 106-210). A solid thermo-plastic composition consists of about 60% of an acetylated starch, 15% of a chlorinated diphenyl resin and about 25% of plasticizer.

2,340,394. Shipping case. John K. Limbert, Warren G. Brane and Nick McClure, assignors to Central Fibre Products Company, Inc., Chicago, Ill. Filed Nov. 23, 1942. 2 claims. (Cl. 229-52).

2,340,452. Composition for use as adhesive. Cyril L. Child, Robert B. F. F. Clarke, and Bernard J. Habgood, assignors to Imperial Chemical Industries Limited, Manchester, England. Filed Oct. 7, 1941. 4 claims. (Cl. 117-72). The intermediate film consists of 1-2 parts of polymerized ethylene and 1 part of a cyclorubber and the surface film is polymerized ethylene.

2,340,473. Container. Ogden Johnson, Bronxville, N. Y. Filed March 18, 1941. 5 claims. (Cl. 229-4.5).

2,340,507. Viscosimeter. Paul E. Bjork, assignor to The Brown Instrument Company, Philadelphia, Pa. Filed Dec. 2, 1941. 17 claims. (Cl. 265-11).

2,340,510. Bag sealing mechanism. Mark H. Corley and John A. Heckman, assignors to Miller Wrapping and Sealing Machine Company, Chicago, Ill. Filed March 6, 1941. 5 claims. (Cl. 154-42).

2,340,511. Method of removing trash from paper pulping machines. Edwin Cowles, assignor to Cowles Company, Princeton, N. J. Filed June 10, 1941. 3 claims. (Cl. 92-20). The method consists in trailing an end of rope-like material in the circulating waste paper stock below the surface thereof and withdrawing the material after trash has been wound thereon.

2,340,546. Container. John W. Meaker, Evanston, Ill. Filed Dec. 13, 1939. 21 claims. (Cl. 229-55). An air-pervious bag for pulverulent material.

2,340,651. Container. Leon E. Denison, assignor to Brooks Paper Company, St. Louis, Mo. Filed May 4, 1942. 4 claims. (Cl. 229-7).

2,340,720. Pulp beater and selector. Harold D. Wells, Glens Falls, N. Y. Filed June 27, 1942. 5 claims. (Cl. 92-22). An apparatus is provided for beating (batch or continuous process) and containing pockets for the collection of trash.

2,340,728. Method of sizing paper. Chester L. Baker and Charles H. Dedrick, assignors to Philadelphia Quartz Company, Philadelphia, Pa. Filed June 28, 1939. 6 claims. (Cl. 92-21). A solution of sodium silicate having a weight ratio of silica to sodium oxide of 2.8:1 to 3.9:1 and a concentration of 0.5 to 5% by weight of silica is aged until the addition of a small quantity of aluminum sul-

fate causes the precipitation of a hydrous silicate, adding the aged solution to the beater and adding sufficient alum to precipitate substantially the entire silicate content of the beater.

2,340,733. Apparatus for determining the bursting strength of sheet material. James d'A. Clark, assignor to The Institute of Paper Chemistry, Appleton, Wis. Filed April 2, 1942. 2 claims. (Cl. 265-14).

2,340,753. Nonrefillable box. William H. Inman, assignor to Bloomer Bros. Company, Newark, N. Y. Filed Nov. 23, 1940. 3 claims. (Cl. 229-45).

2,340,846. Wax emulsion. Chester G. Landes, assignor to American Cyanamid Company, New York, N. Y. Filed Jan. 18, 1941. 4 claims. (Cl. 252-311.5). The emulsifying agent consists of a water-soluble fatty acid, the major portion of which is a soap of a saturated fatty acid of from 8 to 14 carbon atoms.

February 8, 1944

2,340,925. Strainer for pulp digesters. Cheney K. Boyer, assignor to Consolidated Water Power & Paper Company, Wisconsin Rapids, Wis. Filed May 25, 1940. 5 claims. (Cl. 92-7). A perforated, plain, arcuate strainer plate is arranged to provide a substantially concentric space between the inner wall of the digester and the plate.

2,340,956. Tubular product. Harold R. Gillette, assignor to Federal Electric Co., Inc., Chicago, Ill. Filed Jan. 21, 1942. 10 claims. (Cl. 138-76). Fibrous cellulosic material impregnated with pine wood resin.

2,341,009. Method of improving brightness of fibrous materials. Felix Axelrad, assignor to The Richards Chemical Works, Jersey City, N. J. Filed May 18, 1940. 4 claims. (Cl. 250-17). The material is treated with a small amount of an organic compound emitting light of a predetermined wavelength.

2,341,056. Container and method. George A. Moore, assignor to Shellmar Products Company, Mount Vernon, Ohio. Filed May 9, 1942. 2 claims. (Cl. 229-1.5).

2,341,070. Machine for use in setting up cellular cartons. James E. Annen and Alfred Conklin, assignors to Sutherland Paper Company, Kalamazoo, Mich. Filed Nov. 9, 1942. 10 claims. (Cl. 93-37).

2,341,071. Machine for use in setting up cellular cartons. James E. Annen and Alfred Conklin, assignors to Sutherland Paper Company, Kalamazoo, Mich. Filed Nov. 9, 1942. 14 claims. (Cl. 93-37).

2,341,160. Box or cover ending machine. Walter P. Osgood, assignor to Boston Machine Works Company, Lynn, Mass. Filed June 17, 1941. 8 claims. (Cl. 91-51). A coating machine.

2,341,302. Method of handling rosin size. Ernest S. Wilson, assignor to Hercules Powder Company, Wilmington, Del. Filed Nov. 18, 1939. 2 claims. (Cl. 214-152). A paste-type size is desiccated to a free-flowing powder, shipped in a tank car to place of use, and adding water to reconstitute the paste size.

2,341,335. Heating system for composite paperboard machines. Noah M. Simmons, Indianapolis, Ind. Filed March 28, 1940. 7 claims. (Cl. 154-30). A drying system of steam-heated rolls for corrugated board.

2,341,370. Method of making cellulose products. Charles A. Fourness and John B. Catlin, assignors to Paper Patents Company, Neenah, Wis. Filed Aug. 10, 1942. 11 claims. (Cl. 100-14). A bale consisting of a plurality of superposed bats or pads.

2,341,379. Sealed package and method of making same. Garrison Householder and Walter V. Shearer, assignors to The Plastic Coating Corporation, Holyoke, Mass. Filed April 8, 1940. 4 claims. (Cl. 229-3.5).

2,341,397. Carton. Milton A. Smith, assignor to Chicago Carton Company, Chicago, Ill. Filed Aug. 12, 1940. 3 claims. (Cl. 229-17).

2,341,415. Wrapper for packages of cigarettes and the like. Robert C. Adams, assignor to The Marvellum Company, Holyoke, Mass. Filed June 10, 1942. 4 claims. (Cl. 229-87).

2,341,477. Apparatus for internally coating containers. Paul E. Pearson, assignor to Continental Can Company, Inc., New York, N. Y. Filed April 10, 1942. 14 claims. (Cl. 91-45).

2,341,503. Sheet cutting mechanism. Leon E. La Bombard, assignor to The International Paper Box Machine Company, Nashua, N. H. Filed Aug. 20, 1942. 17 claims. (Cl. 164-66). Means for cutting a moving sheet of very thin material.

February 15, 1944

2,341,523. Coating composition. Hans F. Bauer, assignor to Stein, Hall Manufacturing Company, Chicago, Ill. Filed Dec. 18, 1940. 18 claims. (Cl. 106-208). A coating composition comprises a water-dispersible gelatinous film-forming carbohydrate binding agent and a water-soluble alkali acetate containing combined but undissociated acetic acid.

2,341,607. Cardboard cover for wire coat hangers. Max H. Friedler, Lewiston, Maine. Filed Jan. 1, 1942. 5 claims. (Cl. 223-88).

2,341,623. Apparatus for the loosening of matter fibrous materials. Rudolf Kern, Seigburg, Germany; vested in the Alien Property Custodian. Filed Aug. 5, 1940. 6 claims. (Cl. 19-85). The moist matted fibrous material is advanced over a rotary vibrating device, so arranged as to impart successive intermittent blows to the underside of the web.

2,341,634. Stamp envelope. William G. Locke, assignor to Dennison Manufacturing Company, Framingham, Mass. Filed Nov. 25, 1942. 1 claim. (Cl. 229-72).

2,341,640. Machine for disbarking logs. Richard Mehlhorn, Mannheim-Waldhof, Germany; vested in the Alien Property Custodian. Filed Oct. 17, 1939. 2 claims. (Cl. 144-208).

2,341,762. Container. Alfred R. Conklin, assignor to Sutherland Paper Company, Kalamazoo, Mich. Filed June 13, 1942. 6 claims. (Cl. 229-26).

2,341,794. Cigarette paper book. Arthur G. Kliwer, Sioux City, Iowa. Filed July 30, 1941. 2 claims. (Cl. 206-57).

2,341,845. Container and method of making the same. Jacob G. Mark and Francis W. Lanigan, assignors to Dewey and Almy Chemical Company, North Cambridge, Mass. Filed July 27, 1940. 11 claims. (Cl. 229-37).

2,341,928. Double wall folding box. David Levkoff, Brooklyn, N. Y. Filed April 10, 1941. 1 claim. (Cl. 229-34).

2,341,956. Patch applying machine. Edwin G. Staude, Minneapolis, Minn. Filed July 22, 1943. 2 claims. (Cl. 164-68). A machine for combining thin flexible sheets severed from a web to flat articles.

2,342,081. Dispensing container or carton. Edward W. Kirkland and Herman E. Otto, assignors to Cooper Paper Box Corporation, Buffalo, N. Y. Filed Nov. 18, 1942. 10 claims. (Cl. 229-17).

February 22, 1944

2,342,128. Container. George E. Eckman, assignor to American Can Company, New York, N. Y. Filed July 17, 1940. 1 claim. (Cl. 221-11).

2,342,158. Container and method of manufacture. George A. Moore, assignor to Shellmar Products Company, Mount Vernon, Ohio. Filed Jan. 7, 1941. 8 claims. (Cl. 229-3.5).

2,342,198. Method of making cartons. Oscar H. Hultin, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed June 13, 1941. 3 claims. (Cl. 93-3). Method of making a side opening carton from a blank.

2,342,209. Moistureproofed regenerated cellulose. James A. Mitchell, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed Aug. 23, 1941. 1 claim. (Cl. 117-145). The coating is cyclized rubber 24 parts, paraffin wax 3 parts, and polybutene, 3 parts.

2,342,225. Paper pulp preparation. Auxilius P. Schnyder, Teaneck, N. J. Filed Dec. 30, 1941. 18 claims. (Cl. 92-7). A blow tank installation.

2,342,236. Method of and means for binding match book assemblies. Edgar A. Allen, assignor to The Diamond Match Company, New York, N. Y. Filed Dec. 11, 1942. 13 claims. (Cl. 93-2).

2,342,324. Bag-expanding means. Rhea P. Allen, assignor to Brooks Paper Company, St. Louis, Mo. Filed June 24, 1942. 5 claims. (Cl. 229-14).

2,342,344. Loading platform for log-trucking operations. Harold W. Hunter, Blaine, Wash. Filed May 6, 1942. 3 claims. (Cl. 214-41).

2,342,439. Carton and blank for forming the same. Harry F. Waters, New York, N. Y. Filed Feb. 7, 1939. 5 claims. (Cl. 229-14).

2,342,462. Manufacture of plaster lath. Ulysses G. Farmer and Frank H. Wheelock, assignors to Fibreboard Products, Inc., San Francisco, Calif. Filed Feb. 13, 1940. 7 claims. (Cl. 154-2).

2,342,497. Gluing device for wrapping machines, Elmer L. Smith and Carlton Wetsel, assignors to Package Machinery Company, Springfield, Mass. Filed Jan. 29, 1942. 9 claims. (Cl. 91-47).

2,342,533. Method of removing bark from logs. Miles L. Edwards, assignor to Weyerhaeuser Timber Company, Longview, Wash. Filed Jan. 21, 1942. 5 claims. (Cl. 144-208). Method of applying a stream of water to the surface of a log to effect substantially complete removal by erosion of unscored uncut bark.

2,342,536. Spray device for moistening coated paper. Chester A. Garrison, Comstock, Mich. Filed Dec. 26, 1941. 3 claims. (Cl. 91-12). A pair of spraying devices for a coating machine.

2,342,543. Container closure means. William H. Inman, assignor to Bloomer Bros. Company, Newark, N. Y. Filed June 5, 1941. 3 claims. (Cl. 229-26).

2,342,551. Folding box. David Levkoff, Brooklyn, N.Y., assignor of one-fourth each to Evelyn G. Levkoff, Henry S. Levkoff and Edith R. Levkoff. Filed April 2, 1942. 7 claims. (Cl. 229-31).

2,342,553. Method for determining moisture in materials. Albert R. Ilpin, assignor to The Ohio State University Research Foundation, Columbus, Ohio. Filed Dec. 20, 1940. 2 claims. (Cl. 73-51).

2,342,564. Container. Raymond H. Van Saun, assignor to Container Corporation of America, Chicago, Ill. Filed Feb. 26, 1942. 3 claims.

2,342,600. Bottle wrapper. Earl C. Potter, assignor to Container Corporation of America, Chicago, Ill. Filed Oct. 9, 1941. 2 claims. (Cl. 229-89). A bottle wrapper from paperboard or the like.

2,342,611. Cellulosic product. Richard Ericson, assignor to United States Gypsum Company, Chicago, Ill. Filed Nov. 18, 1940. 11 claims. (Cl. 117-66). Process of improving the strength and water resistance of a heat-and-pressure-consolidated hard board consists in saturating the board with an oil at a temperature between 200-300° F. and heating the saturated product at 285-325° F. to harden and polymerize the oil.

2,342,623. Collapsible container. Salvatore Albert Aquino, assignor to The Hinde & Dauch Paper Company, Sandusky, Ohio. Filed May 13, 1943. 11 claims. (Cl. 229-27).

February 29, 1944

2,342,702. Continuous form envelope. John O. Sherman, by Katherine M. Sherman, William C. Sherman and Wellmore B. Turner, executors, Dayton, Ohio. Filed Sept. 9, 1939. 1 claim. (Cl. 229-69).

2,342,801. Method of manufacturing fibrocement pipe. Giovanni Guerci, Turin, Italy; vested in the Alien Property Custodian. Filed Feb. 21, 1940. 2 claims. (Cl. 25-154). Method of manufacturing pipes from a relatively thick mass of fibrous material and cement.

2,342,873. Foldable box. Mack Lester, assignor to the Art Crayon Company, Incorporated, Brooklyn, N. Y. Filed Sept. 3, 1942. 6 claims. (Cl. 206-44).

2,342,968. Dispensing carton. Joseph C. Peurrung, Cincinnati, Ohio. Filed Aug. 25, 1942. 1 claim. (Cl. 229-11).

2,343,027. Process of dehydrating waste liquors from cellulose production. Torsten Ramén, Stockholm, Sweden. Filed Oct. 15, 1941. 6 claims. (Cl. 159-46). The process consists in injecting partially concentrated liquors into hot gases in a finely divided state and using the heat of the gases to concentrate dilute liquor.

2,343,065. Emulsified wax composition and method of preparation. Ralph W. Kumler and Harold Sinclair, assignors to Bennett Incorporated, Cambridge, Mass. Filed June 19, 1940. 3 claims. (Cl. 106-271). Wax is emulsified in water containing a stabilizer substantially inert with respect to alum, admixing with the emulsion alum and less than a chemically equivalent proportion of sodium aluminate and precipitating basic aluminum sulfate while the wax is maintained in emulsified state.

2,343,085. Black liquor concentration. Walter L. Savell, assignor to The Mathieson Alkali Works, Inc., New York, N. Y. Filed Oct. 30, 1940. 2 claims. (Cl. 159-47). In the concentration of black liquor in multiple-effect evaporators, ammonia is introduced into the liquor to be concentrated, the ammonia being vaporized from the liquor in one effect and the ammonia vapors with the evaporated water being passed to another effect.

2,343,095. Resin dispersion useful in the textile and paper industries. Joseph E. Smith, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed Aug. 3, 1940. 6 claims. Cl. 8-143). A highly dispersed polymerized vinyl compound in an aqueous media with a cationic surface active agent is used.

March 7, 1944

2,343,330. Method of manufacturing resin-bearing fibrous pulp articles. Edward E. Sawyer, assignor to The Canal National Bank of Portland, Portland, Maine. Filed May 6, 1943. 2 claims. (Cl. 18-47.5). The process consists of die pressing an intimate mixture of resin and fibers.

2,343,331. Manufacture of containers and the like. Lino Scuss, assignor to Continental Can Company, Inc., New York, N. Y. Filed Jan. 12, 1939. 44 claims. (Cl. 93-81). A method of winding a paper strip on a mandrel.

2,343,340. Method for measurement of moisture content in granular materials. Robert L. Stevens, assignor to Moisture Register Company, Los Angeles County, Calif. Filed Oct. 24, 1940. 5 claims. (Cl. 175-183). The sample is compressed and the moisture content is determined by its influence on a high frequency field in the material.

2,343,363. Glue spreader, surface coater and the like. John E. Black and Robert S. Black, Mendota, Ill. Filed Jan. 13, 1942. 3 claims. (Cl. 91-67.8). A main roll for a surface coating machine comprising a cylindrical roll having a surfacing of rubber-like material.

2,343,520. Method of measuring moisture. Leonard D. Baver and Byron T. Shaw, as-

signors to The Ohio State University Research Foundation, Columbus, Ohio. Filed June 12, 1940. 2 claims. (Cl. 73-51).

2,343,550. Container and process of making same. Donald E. Grove, West Los Angeles, Calif., assignor of one-sixth to Vincent C. Hickson, Los Angeles, Calif. Filed March 30, 1942. 2 claims. (Cl. 229-5.5).

2,343,600. Method for saturation of fibrous materials. Alfred F. Weimann, assignor to Barber Asphalt Corporation, Barber, N. J. Filed March 9, 1940. 3 claims. (Cl. 154-2). A loosely formed bat of fibrous material is partially saturated with a liquid and is then compressed to an extent to cause the liquid to completely saturate the compressed bat and effect solidification of the saturant; the fibers are thus bound together and the bat retains its reduced form.

2,343,601. Apparatus for saturation of fibrous material. Alfred F. Weimann, assignor to Barber Asphalt Corporation, Barber, N. J. Filed Sept. 19, 1941. 5 claims. (Cl. 154-29). An apparatus is described for carrying out the saturation of fibrous material described in U. S. patent 2,343,600.

2,343,716. Fiber containers. Louis P. Toscano and Theodore D. Toscano, Lynbrook, N. Y. Filed July 15, 1942. 3 claims. (Cl. 229-5.6).

2,343,720. Sheet material slitting and winding machine. Peter Van Norde, assignor to Irvington Varnish Insulator Co., Irvington, N. J. Filed Feb. 2, 1943. 6 claims. (Cl. 164-65).

2,343,735. Bituminous waterproofing material. Charles M. Baskin, assignor to Standard Oil Development Company, New York, N. Y. Filed May 26, 1939. 2 claims. (Cl. 106-280). A mixture of a fibrous pulpy material, a mineral flux oil, and various asphalts.

2,343,740. Fibrous sheet covered plywood. Donald G. Birmingham, assignor to Harbor Plywood Corporation, Hoquiam, Wash. Filed Sept. 18, 1940. 11 claims. (Cl. 154-40). A wood veneer and a loosely matted fibrous sheet having a thermosetting resin diffused therethrough are hot pressed.

2,343,857. Pouring carton. Frank C. Morgenroth, Glendale, Calif. Filed July 30, 1941. 4 claims. (Cl. 229-17).

March 14, 1944

2,343,906. Coating machine. John M. Hothersall and John H. Murch, assignors to American Can Company, New York, N. Y. Filed March 17, 1939. 11 claims. (Cl. 226-20). Machine for preparing empty sealed moisture-proof sterile containers for the subsequent packaging of milk and the like.

2,344,008. Box structure. William Trogman, Chicago, Ill. Filed June 6, 1942. 3 claims. (Cl. 229-52).

2,344,009. Box handle and latch. William Trogman, Chicago, Ill. Filed June 6, 1942. 6 claims. (Cl. 229-52).

2,344,047. Pulp machine. John C. Lowe, Quakertown, Pa., assignor of one-half to Harmer R. Lutz, Borough of Sellersville, Pa. Filed May 27, 1941. 7 claims. (Cl. 92-20). An imperforate cylindrical casing and a pair of perforate drums rotatably mounted in the casing in longitudinally spaced relation to each other, the drums being open at their adjacent ends and rotated to cause a circulation of the mix in the drums.

2,344,089. Separation of fatty acids from rosin acids. Arthur W. Hixson and Ralph Miller, assignors to The Chemical Foundation, Incorporated, New York, N. Y. Filed April 23, 1940. 11 claims. (Cl. 260-97.5). Tall oil is dissolved in a liquefied, normally gaseous hydrocarbon, from which the rosin phase is separated by warming the solution.

2,344,104. Manufacture of sodium sulphide. George A. Peirce, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed Aug. 3, 1940. 2 claims. (Cl. 23-134). A method of reduction of sodium sulphate with a carbonaceous reducing agent.

2,344,107. Apparatus for supplying adhesive. Constantin F. Röber and Ernst G. Röthig, Dresden, Germany; vested in the Alien Property Custodian. Filed June 14, 1940. 5 claims. (Cl. 91-50).

2,344,217. Apparatus for measuring surface roughness. Richard E. Reason and Raymond I. Garrod, assignors to Kapella Limited, Leicester, England. Filed Feb. 13, 1941. 20 claims. (Cl. 73-51). A stylus method.

2,344,220. Envelope flap folding machine. Donald E. Stevenson, Monrovia, Calif., assignor to Carpenter Paper Company. Filed Feb. 21, 1941. 18 claims. (Cl. 93-61).

2,344,232. Apparatus for coating. John Campbell and Kenneth A. Taylor, assignors to International Paper Company, New York, N. Y. Filed Aug. 12, 1942. 4 claims. (Cl. 91-53). A doctor blade for a paper coating machine.

2,344,281. Stock feed for papermaking machines. Earl E. Berry and Lloyd Hornbostel, assignors to Beloit Iron Works, Beloit, Wis. Filed Jan. 20, 1939. 27 claims. (Cl 92-44). A stock feed device for a papermaking machine.

2,344,282. Stock inlet for papermaking machines. Earl E. Berry and Lloyd Hornbostel, assignor to Beloit Iron Works, Beloit, Wis. Filed July 31, 1939. 38 claims. (Cl. 92-44). A stock inlet for a papermaking machine.

2,344,303. Container side seam sealing compound applying apparatus. John Henchert and Clayton P. Ball, assignor to Continental Can Company, Inc., New York, N. Y. Filed April 5, 1943. 14 claims. (Cl. 91-51). An apparatus for applying a sealing compound to container body blanks.

2,344,359. Paper container blank. Harry Lehmann, Dusseldorf, Germany; vested in the Alien Property Custodian. Filed March 7, 1939. 3 claims. (Cl. 229-37). A one-piece blank adapted to be folded to form the body of a container.

2,344,372. Means for easily delivering paper, such as wrapping paper. Anton J. Sikström, assignor to Kooperativa Förbundet Förening U.P.A., Stockholm, Sweden. Filed Oct. 22, 1940. 1 claim. (Cl. 242-55.4). A wrapping paper dispensing device.

2,344,411. Treatment of cellulosic material to increase its reactivity. Richard E. Reeves, assignor to The Chemical Foundation, Incorporated, New York, N. Y. Filed May 29, 1939. 1 claim. (Cl. 260-212). Cellulose is treated with 0.12-0.15 *M* periodic acid solution at room temperature for a period of less than 24 hours.

2,344,427. Adhesive applying mechanism. Edwin G. Staude, Minneapolis, Minn. Filed Sept. 21, 1942. 6 claims. (Cl. 91-50).

2,344,448. Fiberboard receptacle. Claude W. Oakes, assignor to Western Electric Company, Incorporated, New York, N. Y. Filed Dec. 24, 1942. 4 claims. (Cl. 229-16).

2,344,470. Paper treatment. Harold S. Mitchell, assignor to Industrial Patents Corporation, Chicago, Ill. Filed Jan. 30, 1939. 4 claims. (Cl. 99-171). Paper containing phosphoric acid is used for packaging food products containing fatty substances normally tending to deteriorate on standing.

March 21, 1944

2,344,525. Container. Russell C. Taylor, assignor to American Can Company, New York, N. Y. Filed May 28, 1941. 1 claim. (Cl. 229-5.6). A rectangular fiber container for liquids.

2,344,559. Carton wrapper. Strother M. Newman, assignor of one-half to John A. Clemm, III, Saunton, Va. Filed Oct. 7, 1941. 7 claims. (Cl. 229-51).

2,344,567. Collapsible egg carton. Melvin H. Sidebotham, Newton, Mass. Filed July 16, 1942. 8 claims. (Cl. 229-28).

2,344,577. Container for cosmetic powders and other cosmetics. Alice M. Whitehead, assignor to Dorothy Gray, Ltd., New York, N. Y. Filed Aug. 27, 1941. 1 claim. (Cl. 229-8).

2,344,600. Wallboard. Philip W. Codwise, assignor to Certain-teed Products Corporation, New York, N. Y. Filed March 6, 1941. 6 claims. (Cl. 154-45.9). A wallboard consisting of a core of hydraulic setting material in set conditions between cover sheets of felted fibrous material and a toxic substance in the face of the board.

2,344,640. Packaging method. Paul I. Rogers, Richmond Hill, N. Y. Filed March 4, 1942. 8 claims. (Cl. 93-6). A method of sterile packaging.

2,344,660. Web dispenser. Frank P. Vaughan, Albert G. Krueger, Norman J. Slye and John B. Engel, assignors to Bay West Paper Company, Green Bay, Wis. Filed July 23, 1941. 11 claims. (Cl. 242-68). A dispenser for web material mounted in a roll upon a core having an apertured end cap.

2,344,661. Method and apparatus for accumulating material in spirals or rolls. William B. Wait, New York, N. Y. Filed Sept. 17, 1940. 7 claims. (Cl. 242-55). A coreless sheet material accumulator.

2,344,686. Paper drier and method. John R. Fanselow, assignor to Paper Patents Company, Neenah, Wis. Filed June 28, 1941. 4 claims. (Cl. 34-18). A method of continuously drying a paper web on a multiple roll drier to a predetermined moisture content which consists in rapidly reducing the moisture content to about 12% by weight by rapidly drying and then slowly reducing the remaining moisture content to the predetermined content.

2,344,688. Emulsifying composition. Cyril C. Folkrod, assignor to Valentine Laboratories, Inc., Chicago, Ill. Filed Feb. 21, 1941. 13 claims. (Cl. 99-1). An emulsifier for oil in water compositions consists of algin and methylcellulose.

2,344,783. Method of watermarking coated paper. Geoge C. Munro, assignor to The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Oct. 2, 1940. 6 claims. (Cl. 117-10). A method of marking two-side-coated paper with a plurality of parallel lines by passing the wet surface of the coated paper over a plurality of small-ear low-velocity steam jets.

2,344,807. Process of applying coating films. Folsom E. Drummond, assignor to New Wrinkle, Inc., Wilmington, Del. Filed May 16, 1940. 6 claims. (Cl. 117-110). Method of applying a coating of wrinkle-forming absorbable solidifying film-forming material on the base of a fibrous material.

2,344,852. Container. Julian D'Esposito, assignor to Container Corporation of America, Chicago, Ill. Filed July 16, 1942. 6 claims. (Cl. 229-44).

2,344,857. Tube carton. Charles I. Elliott, assignor to Radio Corporation of America, New York, N. Y. Filed April 30, 1942. 5 claims. (Cl. 206-46). A carton for a radio tube.

2,344,891. Combined envelope and letter sheet. Bernell H. McKinney, Lindfield, near Sydney, New South Wales, Australia. Filed Aug. 21, 1941. 1 claim. (Cl. 229-92.1).

March 28, 1944

2,345,012. Stacking apparatus. George S. Sillars, assignor to Hoague-Sprague Corporation, Lynn, Mass. Filed June 23, 1942. 26 claims. (Cl. 214-7). An apparatus for stacking box parts.

2,345,035. Manufacture of storage batteries. Robert A. Daily and William C. Pritchard, assignor to General Motors Corporation, Detroit, Mich. Filed July 21, 1943. 5 claims. (Cl. 136-26). An expander for addition to the negative plate paste for use in a Faure type storage battery plate consists of substantially pure uncondensed cellulose with some lignin, prepared from sawdust leached at room temperature with 1-10% caustic solution and then with 3-35% sulphuric acid at a temperature ranging from room temperature to the boiling point of the solution.

2,345,134. Sodium aluminate product and process of producing the same. Frederick K. Lindsay and Benjamin F. Willey, asignors to National Aluminate Corporation, Chicago, Ill. Filed Nov. 27, 1939. 12 claims. (Cl. 23-52). The manufacture of sodium aluminate containing up to 5% of an organic stabilizing agent is claimed.

2,345,142. Process for rendering materials water repellent. Adalbert Müller, Augsburg, Germany; vested in the Alien Property Custodian. Filed May 3, 1940. 9 claims. (Cl. 117-167). A combination of a water-soluble basic salt of aluminum, zircenium, thorium, uranium and titanium and waxes, fats, oils, resins, fatty alcohols, and aliphatic hydrocarbons.

2,345,190. Packaging of wallpapering material. Harry Freund, assignor to United Water Paper Factories, Inc., Chicago, Ill. Filed March 27, 1943. 4 claims. (Cl. 206-47).

2,345,191. Treatment of pigments. Frederick Gage, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed April 9, 1942. 6 claims. (Cl. 106-306). A method of coating pigment particles with tall oil.

2,345,274. Molded pulp egg packing device. Frederick W. Manon, Toronto, Ontario, Canada. Filed Dec. 11, 1939. 5 claims. (Cl. 217-26.5). An egg carrier which is molded from fibrous material.

2,345,311. Preparation of alkaline earth pigments and coating compositions. Alfred D. Wilson, assignor to S. D. Warren Company, Boston, Mass. Filed Sept. 30, 1941. 13 claims. (Cl. 106-148). A method is claimed for deflocculating a pigment; the amount of adhesive required for a coating composition is considerably decreased.

2,345,321. Bearing for rolling mills, mixers, and calendars. Joseph Brown, assignor to David Bridge & Company, Limited, Castleton, Rochdale, England. Filed Jan. 20, 1943. 5 claims. (Cl. 308-72).

2,345,333. Process for the manufacture of solutions of cellulose in sulphuric acid. Heinrich Fink and Richard Hofstadt, Rottweil-on-the-Neckar, Germany; vested in the Alien Property Custodian. Filed July 10, 1940. 1 claim. (Cl. 260-215).

and Thorwald A. Carlson, assignor to Henry A. Wallace, Secretary of Agriculture of the United States of America. Filed Aug. 10, 1940. 3 claims. (Cl. 229-23).

2,345,364. Diaphragm screen. Claude L. Spafford, assignor to Sherbrooke Machineries Limited, Sherbrooke, Quebec, Canada. Filed April 9, 1942. 5 claims. (Cl. 92-30).

2,345,376. Method of making flocked floor coverings. Virgil H. Bodle and George W. Blair, assignors to Mishawaka Rubber and Woolen Manufacturing Company, Mishawaka, Ind. Filed Dec. 20, 1939. 5 claims. (Cl. 117-16).

2,345,411. Method and machine for operating on sheet material. Carl A. Moeller, assignor to Norfolk Paper Co., Inc., Randolph, Mass. Filed Feb. 18, 1941. 22 claims. (Cl. 93-58.2). Mechanism for creasing and slotting a moving sheet material.

2,345,434. Siftproof bag. Albert J. Sterling, Brooklyn, N. Y. (Sarah M. Sterling, executrix). Filed Oct. 25, 1941. 1 claim. (Cl. 229-62).

2,345,486. Receptacle. Nathan Leebov, Pittsburgh, Pa. Filed Aug. 24, 1942. 1 claim. (Cl. 229-44).

2,345,508. Bearing for paper drier cylinders. John W. Smith, Carthage, N. Y. Filed July 30, 1942. 1 claim. (Cl. 308-240).

Properties of Sodium Peroxide Bleached Mechanical Pulp and Its Application in Paper Manufacture*

By Lyman A Beeman[1], Frederick C. Goodwill[2], and Russell Shearer[3]

Abstract

Sodium peroxide bleached mechanical pulp is a new pulp and should be considered as such. The chemical processing of this pulp has reached a development where it is well enough understood to bring its manufacture to a sound, commercial basis.

The well known desirable properties of groundwood pulp giving excellent printing characteristics, high bulk, and opacity are unimpaired and to them are added good brightness, greatly increased stability, and resistance to deterioration. On the paper machine this pulp handles beautifully combining rapid drainage with good forming and "laying" capacity to make possible high machine speeds. It produces a paper with a smooth velvety feel as contrasted with the harshness of many unbleached papers.

The fields of application for this pulp are enormous. With the inhibitions which have been attached to the use of standard groundwood now removed by the improved color and permanence it will be possible to take full advantage of its well known desirable qualities. The economic impact will be felt throughout the industry in the post-war period when the chemicals will be available to extend the process.

Sodium peroxide bleached mechanical pulp is a new pulp. It should not be considered the same as or confused with its cousins groundwood pulp and semi-chemical pulp. One individual expressed its development as the last great step in the perfection of an ideal base pulp for printing papers. Oddly enough the culmination of this development which has been reached during the years of World War II found its beginning in the years of World War I when the first steps were taken to improve groundwood pulp and introduce it into high grade printing papers to enhance printing capacity and quality.

During the intervening years there have been many changes in grinding methods and control, many refinements in screening separation, and better understanding of pulp handling and preparation for paper machines. In spite of the continual improvement in quality and broadening of use, however, there has always been present the objectionable features of low brightness, harshness, and lack of permanence as compared to some of the other pulps. The sodium peroxide treatment eliminates these objectionable features in one stroke. Just what happens chemically is not known but it is apparent that in the oxidizing and the reducing stages of this chemical processing the fibers undergo definite changes which express themselves in new physical characteristics of the pulp.

The process itself and the equipment and chemicals used are described by Reichert *(1)*, and controls and effects of variables are discussed in this publication and others *(2, 3)*. Knowledge and experience has now been built up to a point where this bleaching method is established on a sound commercial basis.

Fundamental Properties

The intelligent pulp maker will immediately perceive of course that many of the fundamental properties of the finished pulp will still be dependent on the wood used and the mill pulping procedure, and operating control. Although it is well known, it may be important enough to repeat the proper specie and quality of wood must be selected, it must be seasoned to the right moisture content, well cleaned, and carefully ground with modern and close control of temperature and stone surface to give the desired properties as measured in bulk, freeness, strength, and opacity. Bleaching does not seem to change the pulp or at least does not change it much in these properties.

Bulkiness as measured either in the pulp itself or in paper can be said to be identical with the unbleached pulp. Although it might be argued there would be some slight changes, these are entirely minor.

The freeness as measured in the pulp does not seem to be changed but it is definitely true the working property and drainage on the paper machine is quite different. This is covered later in describing the paper making and working properties of the pulp.

The strength characteristics as measured in the pulp seem to be identical but due to better working properties it seems to be true there is a tendency toward a slightly stronger finished paper.

The opacity might be expected to be lower because of the brightness of the bleached pulp but this follows only to a very slight extent. In order to express this change numerically and to compare it with other pulps, a series of handsheets in various basis weights were made with identical procedure from 100% standard groundwood, 100% bleached groundwood, 75% standard groundwood and 25% unbleached sulphite, 50% standard groundwood and 50% unbleached sulphite, 25% standard groundwood and 75% unbleached sulphite, 100% unbleached sulphite, 100% bleached hardwood sulphite, and 100% bleached sulphite, These handsheets were measured for opacity with the Bausch & Lomb contrast ratio tester and the readings plotted against basis weight as shown in Fig. 1. It will be noted the curves for bleached and unbleached groundwood lie very cose together with approximately 1% less opacity shown for the bleached.

Brightness

Improvement in color is of course the most impor-

* Presented at the Annual Meeting of the Technical Association of the Pulp & Paper Industry, Hotel Commodore, New York, N. Y., Feb. 14-17, 1944.

[1] Member TAPPI; Operating Manager, St. Regis Paper Co., Deferiet, N. Y.
[2] Member TAPPI; Technical Director, St. Regis Paper Co., Deferiet, N. Y.
[3] Resident Manager, Norfolk Mill, St. Regis Paper Co., Norfolk, N. Y.

tant change and brings the pulp into competitive range in brightness with the bleached chemical pulps at a G. E. brightness reading of 70 and over depending on amount of peroxide used, color of the raw pulp, and other factors. The effect of this increased brightness in pulp on the color of groundwood papers is accentuated because of the opaqueness and covering power as compared to bleached sulphite, sulphate, or soda. In appearance papers made from bleached groundwood show greater increases in brightness than would be expected from averaging the brightness readings of the pulps.

One of the most interesting points in the improvement in color is its continuation in improvement over the paper machine rather than stopping when the pulp reaches the stage where it is furnished in the beater room. In normal operation this increase is enough to offset the usual loss in brightness over the machine due to fresh water use, reversion of chemical pulps, or other causes.

Stability

Permanence of color and resistance to deterioration with aging is also greatly increased. Although the lack of stability in standard groundwood has been over-emphasized, the subject has taken such a foothold in the popular mind that the increase in stability through peroxide treatment has been followed with interest.

The National Bureau of Standards *(5)* reported the following:

"High grade groundwood pulp, such as produced for the manufacture of book and writing papers, is sometimes bleached by processes recently developed with which it is possible to effect considerable improvement in color. Unbleached groundwood papers rapidly become yellowed and brittle when exposed to light because of the high content of lignin, and it is of interest to know whether papers made of the bleached groundwood have better stability in this respect. A test of this has been made at the National Bureau of Standards."

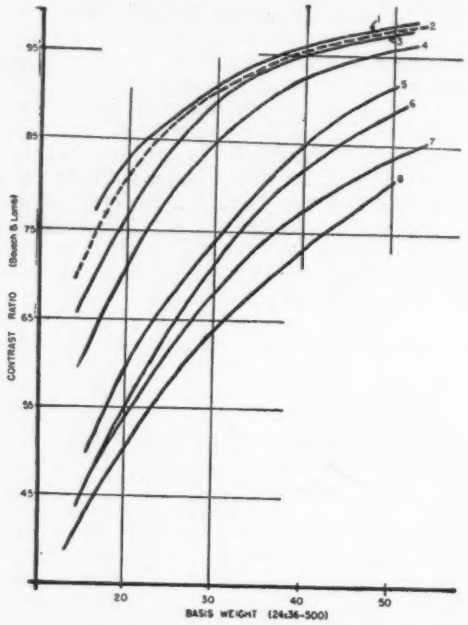


FIG. 1

Comparative Opacity of Wood Pulps. 1—100% Groundwood. 2—Peroxide Bleached Groundwood. 3—75% Groundwood, 25% Unbleached Sulphite. 4—50% Groundwood, 50% Unbleached Sulphite. 5—25% Groundwood, 75% Unbleached Sulphite. 6—100% Unbleached Sulphite. 7—100% Bleached Hardwood Sulphite. 8—100% Bleached Sulphite.

"The papers were composed of 70% groundwood pulp and the balance sulphite pulp. The groundwood pulp of one paper was bleached by the sodium peroxide process and that of the other paper unbleached, otherwise being of the same grade. The papers were exposed to carbon-arc light for 8 hours on each side, under identical conditions, then were examined for degree of yellowing and tested for loss of alpha cellulose. The latter is a good measure of degree of deterioration of papers. While both papers showed considerable yellow, the paper containing bleached groundwood pulp yellowed to a lesser degree. Also, the decrease in alpha cellulose percentage was 19.4 as compared with 32.4 for the paper containing the unbleached groundwood. A comparable value for paper made of alpha pulp, a highly refined wood pulp, is 1.8."

"These results indicate that while this bleached groundwood pulp cannot be regarded as being very stable to light, it is more stable than the unbleached pulp. When a sample of standard newsprint paper was exposed to light under the same conditions, the decrease in alpha cellulose was 40%. In consideration of this loss, as compared with that of the bleached groundwood paper, and the relative degree of yellowing of the two papers, it would appear that the bleached groundwood paper on exposure to light would deteriorate about one-half as rapidly as the newsprint paper. These data as a whole are not extensive enough to be conclusive and should be regarded as merely indicative."

It will be noted from the above quoted figures that the deterioration of paper made with bleached groundwood and unbleached sulphite showed less than half as much deterioration as newsprint when compared to alpha pulp and measured by the loss of alpha cellulose. As related to this it is interesting to note that observation indicates bleached groundwood is about as resistant to deterioration as unbleached sulphite.

The following results taken from samples stored in a shallow drawer of a steel office file are tabulated:

TABLE I.

Sample No.	Peroxide Pulp	Unbl. Gdwd.	Unbl. Sulphite	Brightness 6/18/41	Brightness 1/7/43	Difference
1	70%	....	30%	67.2	66.4	0.8
2	....	70%	30%	61.3	59.8	1.5

Early in the operation of commercial bleaching, a study was started on color stability as measured by the G. E. brightness tester but due to the war this work was discontinued and the results are inconclusive. Five papers were selected as follows:

Finish	Paper Sample No. 1	No. 2	No. 3	No. 4	No. 5
Peroxide pulp	60%	60%	....	....	60%
Unbleached groundwood	....	....	....	65%	....
Unbleached sulphite	10%	10%	100%	35%	40%
Bleached sulphite	30%	30%	....	....	....

These papers were exposed to daylight and the brightness reading plotted against time of exposure. Figure 2 shows comparative curves based on reflectance values in the blue part of the spectrum (standard brightness). These curves indicate that the loss in brightness was of about the same order for all of the papers regardless of composition.

It was decided, upon visual inspection of the samples after exposure, that the brightness readings did not give a true measure of the change that had taken

place. Accordingly, another set of values was obtained from readings of yellow reflectance and the curves based on these readings are shown in Fig. 3. The salient points here are the marked yellowing effect of light on unbleached groundwood and the lack of this effect where peroxide bleached pulp is used, even though, as evidently was the case of sample No. 5, the bleaching job is a poor one.

Working Properties

The working properties of groundwood pulps have always been recognized as excellent because of their high rate of drainage. Even though the fibers may be fine, the drainage is comparatively rapid making it impossible to produce a good close formation on the fourdrinier at high speeds. The introduction of small amounts such as 20 to 30% make a surprising improvement in the ability to carry water on the wire and to handle in the wet presses. It is not the place here to discuss in detail these characteristics of these pulps, but it is desirable to point them out for the purpose of adding that bleaching softens and mellows the pulp (somewhat like chlorine bleaching on chemical pulps) and increases the drainage rate.

This softening and mellowing is an intangible thing but a papermaker who works with unbleached and bleached sulphite will understand the change because it is parallel. In the finished paper this quality gives a smoother more velvety feel and eliminates the objectionable harshness sometimes noticeable in unbleachd groundwood sheets.

It is rather a peculiar thing to find the freeness of the pulp itself does not seem to be changed while the drainage rate in the paper is increased. If one wished to put a numerical measurement on this it would be fair to say the increase in freeness was about 5 degrees Shopper-Riegler. If one wished to use paper mill terms he would say the sheet forms and "lays" better. Just why these things are true is not known and in fact the fundamental knowledge on the chemical and physical changes is so limited it may be best to theorize as little as possible and to report on facts so far as they are available and on observations.

In the storage of the pulp between the bleachery

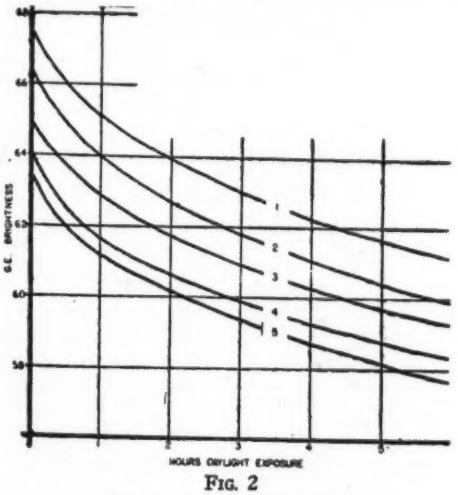


FIG. 2
Fading Study of Paper Samples

	1	2	3	4	5
Peroxide Pulp, %	60	60	..	..	60
Unbleached Groundwood, %	..	..	..	65	..
Unbleached Sulphite, %	10	10	100	35	40
Bleached Sulphite, %	30	30	..	..	..

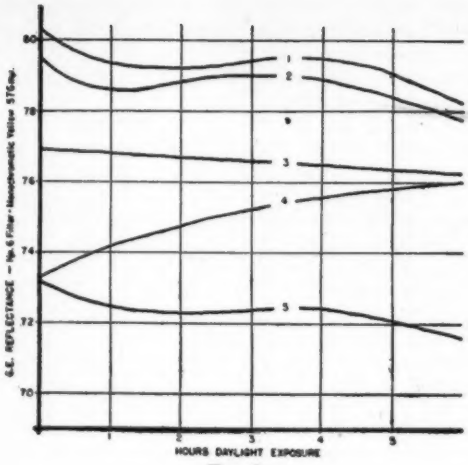


FIG. 3
Fading Study of Paper Samples

and the beater room no special problems are encountered. It has been the experience that no color reversion is noticeable in 72 hours at normal temperatures. With rotten wood however this stability seems to be much lower and might become a problem. It is probably due to reaction of material in the wood with alkali in the bleach liquor since alkali solubility is directly proportionate to the amount of rot in wood as indicated by Bray *(6)*.

The furnishing and handling in the beater room follows the usual technique with the bleached groundwood isolated from any hydrating or treating action which may be necessary for the chemical pulps used in the furnish blend. Where reducing agents are added at the beater the following order of furnish is preferred; draw in the bleached groundwood, introduce the required amount of reducing agent, add part of the alum (particularly if the dyestuff is sensitive to alkali), then follow with the dyestuff and balance of the alum before the balance of the furnish. The tungsten and molybdenum lakes, Ethyl Violet, Crocein Scarlet, and Rhodamine have been used with satisfactory results and without encountering any particular difficulty. The lake colors of course give the appearance of lending more permanence to the paper since they are very resistant in themselves to fading.

Unbleached sulphite will sometimes redden when used in combination with peroxide pulp, although the exact cause is not yet known. Poor washing of the sulphite plays some part. When this reddening occurs, allowance for it must be made in coloring the beater furnish since the red cast is not permanent but fades as the sheet passes over the paper machine dryers.

The cleanliness of the bleached pulp is excellent. Many of the shives and fiber bundles and some of the wood dirt spots are softened so that they are broken up and disappear. In the pipe lines and equipment handling the pulp there is no slime growth and dirt from these sources is eliminated. All groundwood of course contains less carboniferous and metallic dirt than chemical pulp when made from the same wood because there is no concentration of these materials through cooking away of wood substance.

Application

A pulp such as described, obviously has wide application. Its only limitation is in fields where no short

fibered pulp is usable because of extraordinary strength or wearing requirements or in the very small group where very long life is necessary. In the large volume fields of printing and converting it finds full utility and desirability.

As pointed out by Rhodes *(4)* groundwood has a remarkable and peculiar resilience or compressibility which gives it outstanding printing capacity. In rotogravure, this quality removes the ink cleanly from the intaglio wells. In letter press, it has the effect of leveling the surface and flattening out the hills and valleys. In coated and surfaced papers the hard tinny surface is compensated for by the soft yielding interior. It seems to be the super quality base pulp from the printer's standpoint.

In converting papers it is the ideal short fiber for extending and blending with long fiber and works well in percentages all the way from 20 to 80%. It gives bulk and body where desired, it gives absorbency where necessary for pasting or surfacing. It handles well in paper making to help produce the perfectly wound rolls required on high speed converting equipment.

The absorbency of the bleached pulp toward oil is both high and rapid in rate. Where inks dry by absorption this property is valuable and is important in high speed rotary letter press. Another good application is in mimeograph where this quality is combined with opacity and body to give a paper with the necessary use requirements.

These characteristics have long been known in groundwood as made for book and the finer grades but their use has been inhibited by the lack in brightness and permanence. These inhibitions have been lifted by the development of this new bleaching process and the fields of application of these characteristics has been greatly extended. Light weight sheets which can now be made both opaque and good in appearance and stability are in a position to take full advantage for the first time of their natural economies over heavier papers.

The economic impact of bleached mechanical pulps in the post-war period will be felt throughout the paper industry. With the great flexibility of the industry, changes in technology and their reflections in economic pressure are communicated quickly. The introduction of this new papermaking fiber with all its implication of high quality and low cost may well be one of the most important forces shaping the economics of the years ahead.

Technicians in all fields are striving constantly to cut down waste and eliminate wasteful practices. In pulp making this effort has been aimed primarily toward reducing the terrific loss of material through the cooking away and losing of half the wood substance in the standard chemical methods of pulping. The method of attacking this problem has been twofold, first, through attempts (so far with little success) to find a use for the waste liquors, and second, through attempts to produce the proper fiber without losing wood substance. In this bleached groundwood method, there is one very important answer to this great waste problem in the industry. This is the fundamental reason, of course, for the comparatively low cost of this pulp since practically all of the wood substance instead of half of it finds its way into the finished pulp.

As described by Reichert *(1)* this bleaching method is simpler to operate and requires less equipment than chlorine bleaching and therefore is adaptable to small size plants. Unbleached sulphite can also be mixed with groundwood and bleached in the same batch. These facts will make it more feasible than in the past to have small bleacheries.

When any new material is made available, there is always a certain amount of prejudice against it and this has been true of groundwood as it has been improved and has replaced other fiber. The war has been a correcting factor and has made it possible to introduce groundwood pulp and paper in many places heretofore forbidden. This will open up new fields and accelerate the trend toward bleached groundwood papers when chemicals are available in the post-war period.

Literature Cited

1. Reichert, J. S., *Paper Trade J.* 118 No. 11:45-52 (Mar. 16, 1944).
2. Reichert, J. S., Campbell, D. J., Mills, R. T., *Paper Trade J.* 118 No. 15 (April 13, 1943).
3. Reichert, J. S., Campbell, D. J., Secord, R. A., *Paper Trade J.* (in press).
4. Rhodes, Kent, *Paper Trade J.* 118, No. 14:23 (April 6, 1944).
5. News Bulletin of the Paper Section, National Bureau of Standards, (October-November, 1942).
6. Bray, Mark W., *Paper Trade J.* 78, 58 (1924).

Management of Farm Woodlands

Another volume in the American Forestry Series has been published by the McGraw-Hill Book Company. This is The Management of Farm Woodlands by Cedric H. Guise of the New York State College of Agriculture, Cornell University. (352 pages, 6½ x 9, illustrated.) This book is designed primarily to meet the needs of students in agricultural colleges where farm forestry is offered. It should also be of direct assistance to the owners of farm woodlands, most of which lie in the Eastern United States. Details of management are the same throughout the country, although details of application will vary in the different geographic regions. Woodlands occupy more acreage than any other crop on American farms and help support two and one-half million farm families.

Among the subjects covered are: origin and condition of farm woodlands, ecology of woodlands, surveys and maps, volumes of trees and stands, care and improvement of woodlands, establishing and protecting our woodlands, utilization and marketing of woodland products and preservative treatment of farm timbers.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York 17, N. Y., at $3.00 per copy.

B. C. Logging Firms Sold

Eburne Sawmills Ltd., and Pacific Veneer Company Ltd., New Westminster, B. C., have purchased the shares of Canadian Forest Products and the Beaver Cove Timber Company Ltd. The deal is said to involve approximately $6,000,000.

The latter companies have been operating in British Columbia for the past two and a half years as Canadian subsidiaries of Puget Sound Pulp and Timber Company, of Bellingham. The latter, the announcement says, will have representation on the board of directors and will be entitled to receive all Crown grant logs exportable from the logging operations.

Men have already been hired to push completion of a logging railroad up the Nimpkish Valley and into the Davie River area—the heart of one of the largest tracts of timber in the province.

Hot Melt Coatings and Laminants*

By Joseph W. Viner[1] and Bert C. Miller[2]

Abstract

A brief summary of the hot melt method of coating by which plastic materials are applied to the surface of a base stock is given. There are certain limitations which must be considered, in addition to those factors which affect the converting process, in applying this process to the manufacture of grease resistant and water vaporproof products.

This paper concerns a method that has been developed over the past several years to increase the utility and appearance value of papers. In this process molten plastic materials are applied to a base stock at a good speed of production and without the use of solvents or other vehicle carriers for the solids. This eliminates fire hazards, the loss of solvents, and improves the quality over those products produced by the solvent method.

Lacquered and waxed papers have filled a demand for utility purposes for a long time, and these have been supplemented by other special papers, such as flint glazed parchments, glassines, and laminated sheets with high luster, resistance to water or water vapor, grease, heat sealing, and other desirable qualities. Hot melts provide a means for producing some or all of these qualities by a much simpler method.

The solvent method has always presented several problems such as:

(a) the large amounts of solvents required,
(b) the loss of these solvents unless expensive solvent recovery methods are installed,
(c) the fire hazard when operated in or near certain properties, such as a paper mill,
(d) the difficulty of drying without blisters and holes, not to mention the slowness of the drying method nor the expense of the drying equipment.

The hot melt method eliminates most of these problems, and, in addition, has several other advantages.

The hot melt method is to apply the solids in molten form without any solvents. The stock cools immediately and goes into the rewind roll as a finished product with the qualities imparted by the particular hot melt selected.

Resins cannot be used either natural or synthetic, nor the familiar nitrocellulose, as hot melts by just leaving the solvent out. It has been necessary, consequently, to do much research for definite "hot melt compositions" that will accomplish various utility purposes. These efforts have resulted in a variety of hot melts that will provide practically all of the qualities desired.

There are, for instance, hot melts that give:

(a) appearance of high luster only,
(b) appearance of high luster with grease and water proofness,
(c) good finish with high moisture proofness,
(d) alkali proofness or resistance with high finish,
(e) grease resistance with high finish,
(f) heat seal with moisture resistance and grease resistance,
(g) good folding qualities.

There has been no attempt to make hot melt coated papers with **surfaces suitable for printing**. Almost all the work has been along functional lines or to improve the appearance of the paper.

Machinery

COATING. The hot melts are generally of two types; those which require a high temperature of 300 to 400°F. to obtain the proper viscosity of the molten coating, and those that may be applied at less than 300°F.

In the high melt range, it is necessary to use a gravure type of application, in which the fountain and the gravure cylinder are heated to at least 300 to 400°F. The melts under 300°F. can be run on a gravure machine or waxing-type machine having an equalizing rod.

Generally speaking, the high temperature melts need smoothing but not cooling, as they have gloss characteristics of their own without chilling. The melts below 300° F. require both smoothing and chilling for the best results.

For post-war development there are quite a few suggested changes being considered for both the gravure type and equalizing rod type machines. The changes will increase speed of production and enable one to run sheets as well as webs.

LAMINATING. Most of the coating machines can also be made into laminating machines by the addition of rollers which bring the two sheets of paper together. Laminating is generally done below 350°F.—most of it between 150 to 250°F.

HEATING PROBLEMS. To run hot melt coatings and hot melt laminates proper temperature range must be used. For best results with the high melt range materials, it is generally found that both the fountain and the rolls should be oil or electrically heated. For the lower range, steam, if available, is sufficient.

SMOOTHING BAR OR ROLL. The solvent type of lacquer has a natural flow-out which results in a smooth coating. Hot melts on the other hand set very rapidly and do not smooth out to a gloss finish by themselves. They must be smoothed out mechanically by a so-called heated doctor roll or heated smoothing bar which comes in contact with the hot coatings immediately after their application to the base stock. The smoothing bar or roll remelts the coating, giving the surface both a continuous film and a high gloss.

SHEET MACHINE. A great deal of thought and engineering work is being expended on the development of a machine which will run all weights and sizes of paper or board through the hot melt process. There are some very difficult problems attached to this, but it is believed that, sooner or later, they will be overcome.

Melts

The hot melts are divided into high and low melt types, some of which contain all resins and some of which contain resins and other additives such as waxes. For each melt and each paper surface there is a certain running temperature at which these materials should be applied to the paper in order to obtain the proper film thickness.

Many different formulations are necessary to accomplish the various utility objectives. There are certain definite tests set up for the determination of

* Presented at the Annual Meeting of the Technical Association of the Pulp & Paper Industry, Hotel Commodore, New York, N. Y., Feb. 14-17, 1944.

[1] Vice President, International Printing Ink Div. Interchemical Corp., New York, N. Y.
[2] President, Bert C. Miller, Inc., E. Orange, N. J.

gloss, heat seal, blocking, folding qualities, and the resistance to water, moisture vapor, greases, and alkali. The selection of melt must depend upon the result desired. There is no one melt which has all these characteristics.

There is no loss in hot melt, 100% of the material is used for coating. Since a very thin coating generally accomplishes the purpose—if the film is continuous and if proper paper is selected—the coat is not excessive. Hot melts, generally, are less costly than other methods.

On papers like glassine from 2 to 3 pounds per standard ream will suffice; on book and wrapping papers, from 4 to 6 pounds of hot melt may be necessary. For a continuous film with good moisture vapor resistance, grease resistance, or good heat seal, 8 pounds of hot melt per ream may be necessary on most wrapping or bag stock.

It is difficult to state exactly what hot melts will cost unless a specific problem is in mind. But from experience, hot melts for gloss only, as in shelf papers, would probably cost between 20 and 30 cents a pound. Hot melts for grease resistance, heat seal, and moisture vapor resistance might cost between 25 and 50 cents a pound according to the degree of resistance and other qualities required.

Use and Limitations

It is well in discussing hot melts to bring out the problems that might arise in different situations. These can be enumerated briefly, as follows:

1. Hot melts are generally coated over the finished printed product. By the proper selection of inks and by special methods, such as gravure, it might be possible to print over certain hot melt coatings, but it is not recommended nor should it be considered the accepted practice. Certainly it is not possible to print over the type of hot melts that are mainly wax.

2. In coating hot melts over printed or colored surfaces inks or colored coatings must be selected that will not bleed into the particular hot melt used. This is no different than when lacquers are involved; that is, an alcohol soluble varnish can not be put over an alcohol soluble print or coating. This is not a difficult obstacle, but it must be reckoned with on any job so that a compatible melt can be formulated for the various types of binders in the inks or colors.

3. It has been found that there is a great deal of difference in the penetration and surface acceptance of hot melts by papers. For both lacquers and hot melts it is always wise to choose paper with the surface hardness that will require the least amount of coating per ream of paper to get the desired results. In other words, it is difficult to get gloss on certain soft and porous papers. It is difficult to get greaseproofness with a surface which has paper fibers that stick up through the coating. Paper selection, therefore, is definitely necessary to obtain the best results.

4. The speed of production is entirely dependent upon the machinery used, the amount of continuous heat available to bring about the proper viscosity for coating, the heat available for the smoothing bar, and the chilling or cooling prior to rewinding. Normally the production for coating might be from 50 to 250 feet a minute. Laminating speeds will reach 300 to 500 feet a minute under proper conditions.

5. It is almost impossible to run metallic hot melts and get gloss because the hot melts chill so quickly that there is no chance for "leafing" of the metallic powders.

6. Only a few pigmented hot melts have been made. There is a definite problem in connection with the grinding of certain pigments into the hot melt solutions at the high temperatures. This is a post-war problem, but it is expected such problems will be worked out as soon as special machinery becomes available.

7. There is difficulty in gluing over hot melts; and it is also difficult to leave gluing strips or gluing spots since the hot melt coating is generally continuous. By the rotogravure method, however, both strips and spaces may be left. It is believed that by working with adhesive companies this problem can be worked out; but it is recognized, nevertheless, that there are difficulties which, to date, have not been overcome.

8. There are also folding problems but these can be corrected by choosing the proper kind of paper, by limiting the film thickness, and by choosing a hot melt that has folding qualities. This is particularly troublesome when moisture vapor or grease proofness in bags or envelopes or other containers where there must always be a fold, is desired.

9. The hot melt method does not add strength to the paper nor does it detract from the strength of the paper.

TAPPI Notes

C. B. Pooler, formerly of the U. S. Gypsum Company is now vice president in charge of manufacturing of the Philip Carey Manufacturing Company, Lockland, Ohio.

Pierre Drewson has resigned his position with the Hinde & Dauch Paper Company and may be reached at P. O. Box 104 Northampton, Mass.

J. D. Jenssen is president of the newly organized firm of G. D. Jenssen Company, Inc., 103 Park avenue, New York, N. Y.

The M. Ames Chemical Works, Inc., 21 Rogers street, Glens Falls, N. Y., has undertaken the manufacture of the dry-indicator powder specified in the TAPPI Standard for water resistance of paper (dry-indicator method) T 433 m. B. W. Scribner of the National Bureau of Standards indicates that he finds their powder to be entirely satisfactory and recommends its use in the interest of improved agreement of test results by different laboratoris. Reference to it will be made in the revision of the method now in progress.

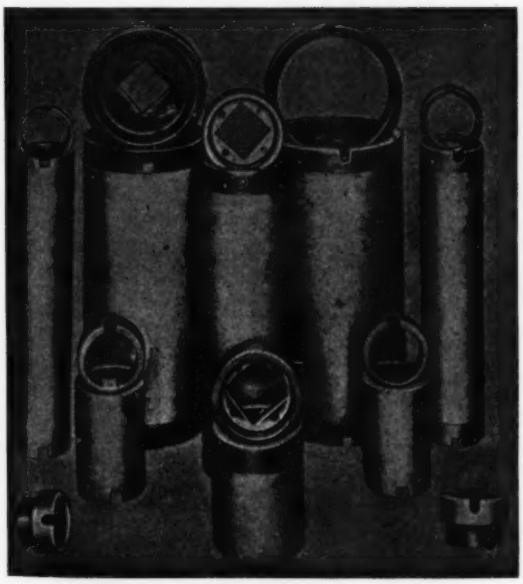
The Empire State Section of TAPPI and the New York-Canadian Div. of the Superintendents Association will hold a postwar conference at the Woodruff Hotel, Watertown, N. Y. on June 23-24, 1944.

The Lombard Governor Company of Ashland, Mass. has become a sustaining member of the Technical Association. The Company was formed in 1894 by Nathaniel Lombard who made important improvements in the method of governing the speeds of water wheels. Following the last war the company entered the field of making diesel engines. Among the products of the company at the present time are very precise surface and angle plates, parts of small steam turbines, universal milling machines, complete pump and blower turbines for B. F. Sturtevant Company and Westinghouse, and machine tools, mostly for war uses. The company has received the Army and Navy E award. An excellent book featuring the company's present activities may be obtained on request. It is entitled "A Report to the Nation" and is an outstanding example of good work in public relations.

PULP

Perkins-Goodwin Co.
ESTABLISHED 1846
30 ROCKEFELLER PLAZA · NEW YORK
CHICAGO OFFICE: CHICAGO DAILY NEWS BLDG.

PAPER



ELIXMAN

CAPS

Straight wound paper cores made in sizes from 2" to 10" inside diameter with any thickness wall required.

Long draw protected slot caps of heavy gauge steel in all standard sizes.

Heavy duty caps with reenforced square hole. This patented feature of reenforcement gives added strength and durability.

CORES

Samples of caps or cores will be gladly submitted

ELIXMAN PAPER CORE COMPANY, INC.
CORINTH, N. Y.

New York Paper and Pulp Market Review

Canada Reports Loss of 7.5 Percent In Production of 30-Pound Newsprint Over Standard Paper—Mill Receipts of Pulpwood Up 22 Percent In April But Below 1942 — Waste Demand Heavy.

Office of the PAPER TRADE JOURNAL,
Wednesday, June 14, 1944.

Demand for paper and paper board in the wholesale market continues heavy with the supply of many paper items tighter and prospect of availability in the future more uncertain. This difficult market and trade situation is reflected in most of many reports received from manufacturers' representatives, jobbers, and general paper merchants this week. It is clearly understood in the trade that the short paper supply situation is caused by the large and increasing requirements of the armed forces. Wrapping papers, all kraft items and container board, especially, are reported in very short supply for home front uses.

Paper production for the week ended June 3 was estimated at 88.3%, compared with 84.7% for 1943, with 89.7% for 1942, with 98.0% for 1941, and with 91.3% for the corresponding week for 1940.

Paper board production for the week ended June 3 was 93.0%, compared with 92.0% for 1943, with 69.0% for 1942, with 84.0% for 1941, and with 77.9% for the corresponding week for 1940.

Loss in newsprint production in the 30-pound weight, compared with the 32-pound standard, is about according to estimates. The Canadian Administrator of Newsprint, Guy E. Hoult, states the loss in manufacturing the 30-pound paper was 7.5%. May production is estimated at between 185,000 and 188,000 tons of mixed weights, compared with 200,000 tons of the standard print paper that could have been produced in the same period.

Wood Pulp

Some seasonal handicaps have occurred in the progress of the Victory Pulpwood Campaign. Mill receipts of wood, however, are about 1943 but below needs. Mill receipts during April totaled 1,131,473 cords of domestic wood and 72,183 cords were received from Canada. Domestic pulpwood receipts were 22% higher than in April 1943, but approximately 57,500 cords below the same month in 1942. Largest production in April was in the Southern Region, totaling 523,486 cords; Pacific Northwest, 225,475 cords; Lake States, 148,163 cords; Appalachian, 139,144 cords, and the Northeast, 95,205 cords.

Rags

Demand for new cotton cuttings is active and mills are freely buying all paper-making grades. Prices are strong at ceilings.

The old cotton rag market is active and demand is above current supply in the roofing grades. Prices are firm at ceilings.

Old Rope and Bagging

No important change has been reported in the old rope market this week. Demand for all fibers is active. Prices are firm at ceilings.

No improvement has been reported in the slow demand for scrap bagging. Mill buying is very narrow and prices are soft and nominal.

Old Waste Paper

Mill demand for paper stock is reported urgent. Supplies of the lower grades, No. 1 mixed and No. 1 news, are reported more limited at this date.

The OPA has amended its wording in MPR-30, and the regulation now permits sales agents to receive commissions on sales of waste paper, the same as accorded brokers. This removes the objectionable discriminatory phrase which the Court asked to be corrected.

Twine

No important change in the twime market has been reported this week. Demand is good for the few available grades available for trade distribution and civilian uses. Prices are firm and unchanged.

Paratrooper Registers at Syracuse

A paratrooper, William D. Hubbard, of New York City, invalided home from Algiers, is the first student to register in the special courses set up at the New York State College of Forestry, Syracuse University, in connection with the educational program of the United States Veterans Administration, which covers both professional and vocational training.

Acting Dean Joseph S. Illick of the College says: "We regard the training of returned veterans as our foremost education responsibility, and every effort has been made to give discharged veterans the best possible training adapted to their personal aptitudes and needs. This applies both to the College and to the New York State Ranger School at Wanakena, N. Y."

Mr. Hubbard states that after making a survey of the educational opportunities for discharged veterans he chose forestry and decided to come to Syracuse for his professional training. He completed practically two years of study at Harvard University before entering the Army.

New Brown Appointments

Announcement is made of the appointment of the Dillard Paper Company, Roanoke, Va., as a distributor of L. L. Brown's Linen Ledger, Greylock Ledger and Escort Ledger and Machine Posting. The first named paper is the well-known, 100% new white linen and cotton cuttings permanent record paper made by the L. I. Brown Paper Company, Adams, Mass. The remaining two are made from 75% and 50%, respectively, new cotton fibers.

The Garrett-Buchanan Company of Philadelphia has been appointed a distributor of L. L. Brown's Fine, an 85% new cotton fiber paper made by the L. L. Brown Paper Company, Adams, Mass. This paper is stocked in substances 24 and 28, white; and in buff and blue in substance 24. In addition to L. L. Brown's Fine, The Garrett-Buchanan Company stocks the following L. L. Brown papers: L. L. Brown's Linen Ledger, Forward Linen Ledger, Greylock Ledger, Escort Ledger, Forward Bond, Escort Bond, Resistall Linen Ledger and Resistall Index Bristol.

☆ When Alexander Graham Bell's telephone succeeded in projecting the human voice through space, Yankee ingenuity won another signal victory. Call it research if you like. Lindsay desires by sincere effort to contribute materially to the improvement of Fourdrinier wire cloth and of the paper that is made from it.

THE LINDSAY WIRE WEAVING COMPANY
Serving the Paper Industry Since 1903
14001-14299 ASPINWALL AVE., CLEVELAND 10, OHIO

Lindsay **WIRES**
FOR PAPER MILLS

KOSMOS—DIXIE PARIS BLACKS

Unexcelled carbon black pigments for all types of paper and board stocks.

Outstanding for soft texture, particle fineness, and jet black color.

Best for performance in the Beater and Jordan because of ease of wetting and ready dispersion in the pulp.

Takes well to the fiber and shows high retention.

UNITED CARBON COMPANY, INC.
Charleston, West Virginia
New York Akron Chicago

Kalamazoo GLAZED TILE

— The Finest Material for Paper Mill Needs —

Hundreds of paper mill executives and engineers know that Kalamazoo Tile construction costs less—lasts longer—controls stock better—requires less maintenance—and is more flexible as to size or design in meeting production layouts.

No other material equals the smooth, hard surface that is impervious to most chemicals—flushes clean—does not flake, pit or scale—and is free from friction.

Should fins—midfeathers—agitators—round—square or tapered ends, corners and bottoms be needed—the exclusive Kalamazoo method makes it easy to construct and moderate in cost, usually less than reinforced concrete.

Ask for engineering data.

Kalamazoo **TANK & SILO CO.**
KALAMAZOO - MICHIGAN

We Are Looking for Trouble

Often little things mean more work for the machine hand, the superintendent, or the purchasing agent. Does some little thing give trouble on your screens? Write us about it! Or ask to have a *UNION* representative call!

We may be able to help
and we'd sure be glad to try.

UNION SCREEN PLATE COMPANY
FITCHBURG, MASS.
(ASSOCIATED WITH UNION MACH NE CO.)

MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL,
Wednesday, June 14, 1944.

BLANC FIXE—The market for blanc fixe continues to conform to prevailing quotations. Current demand fair. The pulp is currently quoted at $40 per ton, in barrels, at works; the powder is currently quoted at $60 per ton.

BLEACHING POWDER—Current demand is reported good. Supply situation reported satisfactory. Bleaching powder is currently quoted at from $2.50 to $3.10 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 25 cents per pound; 2,000 pounds, 24½ cents per pound; less than 2,000 pounds, 24¾ cents per pound, f. o. b. shipping point.

CAUSTIC SODA—Supply situation continues rather tight, with production and demand reported heavy. Solid caustic soda is currently quoted at $2.30 per 100 pounds. The flake and ground are currently quoted at $2.70 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CHINA CLAY—Demand for some grades of china clay is reported moderate this week. Domestic filler clay is currently quoted at from $7.50 to $15 per ton; coating clay is quoted at from $12 to $22 per ton, at mines. Imported china clay is currently quoted at from $13 to $25 per long ton, ship side.

CHLORINE—Production reported larger. Demand for all uses heavy; most essential requirements fulfilled. Prices remain unchanged. Chlorine is quoted at $1.75 per 100 pounds, in single-unit tank cars, f. o. b. works.

ROSIN—Higher prices are quoted on some grades of rosin this week: "G" gum rosin is currently quoted at $5.37 per 100 pounds, in barrels, Savannah. "FF" wood rosin is currently quoted at $5.37 per 100 pounds, in barrels, New York. Seventy per cent gum rosin is currently offered at $5.64 per 100 pounds, f. o. b. works.

SALT CAKE—Demand reported moderate. Quotations on salt cake continue to remain unchanged. Domestic salt cake is currently quoted at $16 per ton.

SODA ASH—Market requirements for soda ash is very heavy. Production reported at higher level but demand is in excess of supply. Prices continue unchanged. Prices on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—Corn is reported coming into market in large volume, but below industrial needs. Market still tight. Quotations continue unchanged. Pearl is currently quoted at $3.72 per 100 pounds. The powdered grade is currently quoted at $3.83 per 100 pounds. All prices f. o. b. Chicago.

SULPHITE OF ALUMINA — Market situation is reported satisfactory. Quotations unchanged. Prices on the commercial grades are quoted at from $1.15 to $1.25 per 100 pounds. The iron free is currently quoted at $2.35 per 100 pounds. All prices in car lots, in bags, f. o. b. works.

SULPHUR—Demand is reported steady for sulphur. Quotations on all grades continue unchanged. Annual contracts are currently quoted at $16 per long ton, f. o. b. mines. The current contract price at Gulf Ports remains unchanged at $17.50 per long ton.

TALC—The market for domestic talc is reported moderately active. Quotations unchanged. Domestic grades are quoted at from $16 to $21 per ton, at mines.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

Standard News, per ton—

Roll, contract	*$58.00	●	—
Sheets	66.00	"	—

* OPA Maximum Price.

Kraft—per cwt.—Carload Quantities
Zone A, f.o.b. Mill

Superstandard Wrapping	*$5.25	●	—
No. 1 Wrapping	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag	*4.375	"	—

* OPA Manufacturers' Prices.

Tissues—Per Ream—Carlots

White No. 1	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½	1.00	"	—
White No. 2	.90	"	—
Anti-Tarnish M.F.	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—

Toilet—1 M. Sheets—Per Case

Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet	5.70	"	—

Paper Towels, Per Case—

Unbleached, Jr.	2.20	"	—
Bleached, Jr.	3.20	"	—

Manila—per cwt.—C. l. f. a.

No. 1 Jute	11.25	●	—
No. 1 Manila Wrapping, 35 lb.	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.	5.75	"	6.00

Boards, per ton—

News	*48.00	●	—
Chip	*48.00	"	—
Sgl. Mla. Ll. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items,
Delivered in Zone 1:

	Bonds		Ledgers	
100% Rag Ext. No. 1	$39.10	● $46.00	$40.25	● $47.25
100% Rag	32.20	" 37.75	33.35	" 39.25
85% Rag	....	"	29.90	" 35.00
75% Rag	23.00	" 27.00	24.15	" 28.25
65% Rag	....	"	22.80	" 27.75
50% Rag	18.70	" 22.75	19.90	" 24.25
25% Rag	16.40	" 20.00	17.55	" 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—
White, Assorted Items.
Delivered in Zone 1:

	Bonds		Ledgers	
No. 1	$10.55	● $12.75	$11.70	● $14.25
No. 2	9.65	" 11.75	10.80	" 13.25
No. 3	9.20	" 11.25	10.35	" 12.50
No. 4	8.90	" 10.75	10.05	" 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—
White, Cased Paper.
Delivered in Zone 1:

No. 1 Glossy Coated	$13.65	● $15.50	
No. 2 Glossy Coated	12.40	" 14.00	
No. 3 Glossy Coated	11.60	" 13.25	
No. 4 Glossy Coated	11.15	" 12.75	
No. 1 Antique (watermarked)	10.25	" 11.75	
No. 2 Offset	9.60	" 11.00	
A Grade E. F.	9.35	" 10.75	
A Grade S. & S. C.	9.60	" 11.00	
B Grade E. F.	8.85	" 10.25	
B Grade S. & S. C.	9.10	" 10.50	
C Grade E. F.	8.55	" 9.75	
C Grade S. & S. C.	8.80	" 10.00	
D Grade E. F.	8.25	" 9.50	
D Grade S. & S. C.	8.50	" 9.75	

Ivory & India at $.50 cwt. extra

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight Not Exceeding OPA Allowances.

Bl. Softwood Sulphite	$86.00
Unbl. Softwood Sulphite	74.00
Bl. Hardwood Sulphite	83.50
Unbl. Hardwood Sulphite	71.50
Bl. Mitscherlich	81.00
Unbl. Mitscherlich	72.00 ● 82.00
N. Bleached Sulphate	86.00
S. Bleached Sulphate	79.00
N. Semi-Bleached Sulphate	82.00
S. Semi-Bleached Sulphate	75.00
N. Unbl. Sulphate	73.00
S. Unbl. Sulphate	63.50
Bl. Soda	72.00
Unbl. Soda	68.00
Groundwood	50.00

Transportation Allowances
Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area)	10.50
West Coast (out area)	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area)	9.50
West Coast (out area)	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area)	7.50
West Coast (out area)	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices

Domestic Rags

New Rags
(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	●	7.25*
Silesias No. 1	—	"	5.75*
New Unbleached	6.75	"	7.50*
Blue Overall	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

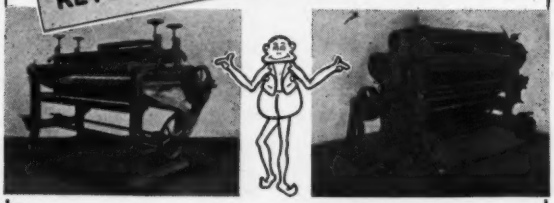
PRICE & PIERCE »»»»»»»» ltd •

Wood Pulp & Paper Agents

60 East 42 Street
New York. N. Y.

WALDRON COATERS

KNIFE
ROLL & KNIFE
REVERSE ROLL



Regardless of type, WALDRON Coating Machines have long been famous for the smooth, uniform quality of the coatings they apply. The secret is in their accurately proportioned construction and finely ground rolls.

Write for full particulars now to be ready for post war processing requirements.

JOHN WALDRON CORP.
Main Office and Works
New Brunswick, New Jersey
MACHINES

HYROTO
MACHINES

Apply HOT or COLD fluids
for COATING • LAMINATING • PRINTING
Paper, Kraft, Cardboard, Foil, Pliofilm, Cellophane
— *Special Machines Designed* —

ROTOGRAVURE ENGINEERING CO.
299 Marginal Street East Boston 28, Mass.

WORKING for LIBERTY

AFTER 116 YEARS

Continuous service to the paper industry today—we are devoting our engineering and manufacturing facilities to the production of machines or parts vital to the war and to victory. However your maintenance and repair requirements will receive our best attention.

THE SMITH & WINCHESTER
MANUFACTURING COMPANY
Plant and Offices at South Windham, Connecticut

GEIGY

DYESTUFF MAKERS SINCE 1859

PRESENTED IN U. S. AND CANADA BY
GEIGY COMPANY INC.
88-91 BARCLAY STREET,
NEW YORK NEW YORK

BRANCHES
BOSTON, PROVIDENCE,
TORONTO, PHILADELPHIA,
CHARLOTTE, CINCINNATI,
PORTLAND, ORE.

CLINTON

• QUALITY
• UNIFORMITY
• SERVICE

STARCHES
SPECIAL GRADES FOR BEATER, CALENDER AND TUB SIZING

CLINTON COMPANY CLINTON, IOWA

BUILT TO STAND THE GRIND OF HIGH SPEED QUALITY PRODUCTION. FOR EVERY GRADE OF PAPER THERE'S A SIZE AND TYPE TO MEET YOUR NEEDS.

Langston

SLITTERS AND ROLL WINDERS

SAMUEL M. LANGSTON COMPANY, Camden, New Jersey

Old Rags

White, No. 1—			
Repacked	*3.80	"	—
Miscellaneous	*3.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags

New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25

Old Rags

No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

All Prices Nominal

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	.17½	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—

(Hard Fiber)

Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila	—	"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill.)

Shirt Cuttings—	
New White No. 1	.07¼
New White No. 2	.05¾
Light Silesias	.05¾
Black Silesias, soft	.03½
New Unbleached	.07½
Washable Prints	.04¼
Washable No. 1	.03
Blue Overall	.05½
Cottons—According to grades—	
Washable shredding	.01¾
Fancy Percales	.04¾
New Black Soft	.03¼
Khaki Cuttings—	
Unbleachable Cotton Cuttings	.03½
Bleachable Cotton Cuttings	.04¼
Men's Corduroy	.03½
Ladies' Corduroy	.03
Cottonades	.03¼

Domestic Rags (Old)

White No. 1 — Repacked	3.80	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
White No. 2 — Repacked	2.90	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—

Black Stockings—

(Export) ..... Nominal

Roofing Stock—

Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
No. 1 Clean bright—			
Sisal Strings			.04
No. 2 Clean bright—			
Sisal Strings			.03
Sisal Jute	.02½	"	.02¾
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings			
Misc.	2.15	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Kraft Corrugated Cuttings	2.25	"	—
Old Corrugated Containers	1.15	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White and Colored Tabulating Cards	2.25	"	—
Ground Wood Tabulating Cards	1.35	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	—	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	
Mixed Rope	—	"	1.55
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Car Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	—	"	2.50
South American	—	"	3.00
Wool Tares—			
Foreign	(nominal)		
Domestic	—	"	4.25
Aust. Wool Pouches	—	"	3.25
New Zealand Wool Pouches	—	"	3.50
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Roofing Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.03
New White No 1.	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06¼
Underwear Cutters, Bleached	.06¼	"	06¾
Underwear Cutters, Unbleached	.05¾	"	.06
Silesias No. 1	.06	"	.06¼
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¾	"	—
Washable	.02¾	"	.03
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03½
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—			
Repacked	3.80	@	—*
Miscellaneous	3.20	"	—*
White No. 2—			
Miscellaneous	2.65	"	—*
Twos and Blues, Repacked	2.20	"	—*
Old Blue Overalls	2.25	"	2.50
Thirds and Blues, Repacked	2.20	"	—*
Miscellaneous	1.80	"	—*
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—*
No. 2	1.45	"	—*
No. 3	1.35	"	—*
No. 4	1.35	"	—*
No. 5, Quality A	1.35	"	—*
Quality B	1.20	"	—*
Quality C	.95	"	—*
Old Manila Rope	5.75	"	—

* OPA Maximum Prices

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Furtians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	1.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—

SCREENS
of Perforated Metal

The Harrington & King PERFORATING CO.

5652 Fillmore St., Chicago 44, Ill. 114 Liberty St., New York 6, N. Y.

For High-Speed, Dependable
PAPER CONVERTING MACHINES
contact
POTDEVIN

Paper Bag Machines, Aniline & Oil-Ink Presses, Waxing, Gluing, Varnishing, Laminating Machines.

POTDEVIN MACHINE CO.
EST. 1893
1223 38th ST BROOKLYN, N. Y.

POTDEVIN

Since 1901

Dietz MACHINE WORKS
DIETZWORKS PHILA. PA.
MANUFACTURERS

TOILET ROLL CONVERTING MACHINES
TOWEL ROLL CONVERTERS
SPECIAL MACHINERY
ANILINE PRINTERS
TOWEL INTERFOLDING MACHINES
ROTARY CARD CUTTERS
SLITTERS FOR VULCANIZED FIBRE

126 W. Fontaine St.
PHILADELPHIA 22, PA.

PENNOTEX OIL CORPORATION
29 Broadway
New York, N. Y.

AMORPHOUS WAXES
Melting Points 120° F. to 205° F.

For the Manufacture of

LAMINATING PAPER . . GLASSINES . . WATER-PROOFING . . GREASE PROOFING . . EXTENDERS FOR PARAFFIN, FOOD CONTAINERS, CONTAINER LININGS, ADHESIVENESS AND PROTECTIVE COATING.

SONOCO PAPER MILL CORES

RETURNABLE
DURO —our standard returnable paper mill core of plus-standard quality.
EN-DURO —a super-quality core to meet demands for extra strength and service.

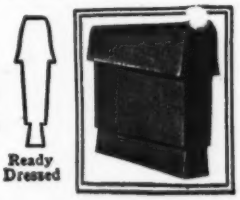
NON-RETURNABLE
RHINO
—an extremely tough and strong core with a low cost that meets the market for a standard product giving superior service.

SONOCO PRODUCTS COMPANY
HARTSVILLE, S. C. MYSTIC, CONN.
BRANTFORD, ONT. ROCKINGHAM, N. C. LOWELL, MASS.

SONOCO PAPER CARRIERS

"READY DRESSED" **MILL COGS**
LABOR SAVING—TIME SAVING

THE MOST ECONOMICAL FILLING THAT CAN BE PUT IN A MORTISE WHEEL

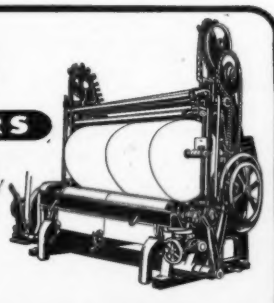


WE MAKE ANY STYLE OR SIZE WANTED

WRITE FOR INSTRUCTION SHEET "C" WHICH IS FREE

QUICK SERVICE ON ALL SIZES
THE N. P. BOWSHER CO., South Bend, Ind.

WINDERS
REWINDERS
SLITTERS



CAMACHINES—for use in paper and board mills, also converting plants. Built in widths from 18 inches to 310 inches.

We build web tension and web guiding controls also. Write for details.

CAMERON MACHINE COMPANY, 61 Poplar Street, Brooklyn, New York
MIDWEST OFFICE: Harris Trust Building, 111 West Monroe Street, Chicago

---

The Trade-Mark of
RELIABLE FELTS

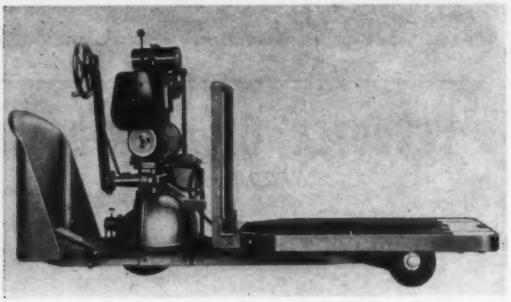
The Waterbury Felt Co.
SKANEATELES FALLS, N. Y.

New Truck-Man

A new Truck-Man designed for moving skidded loads of one ton or under, has been announced. It introduces new features designed to provide safe, efficient moving of today's war materials and the materials of postwar tomorrow.

Easier, safer operation and greater flexibility have been built into the new, improved one-ton capacity Truck-Man, according to T. B. Funk, president of Yard-Man Inc., Jackson 67, Mich., the manufacturer of the new Truck-Man.

One of the important improvements is a patented two-speed drive which makes both a low and a high speed instantly available. The low speed is adapted



MODEL D, TRUCK-MAN

for starting, climbing ramps, going in and out of freight cars or other tight places, and for moving material over rough floors. For light loads and movement without loads, the high speed is instantly available. The Truck-Man turns in its own length.

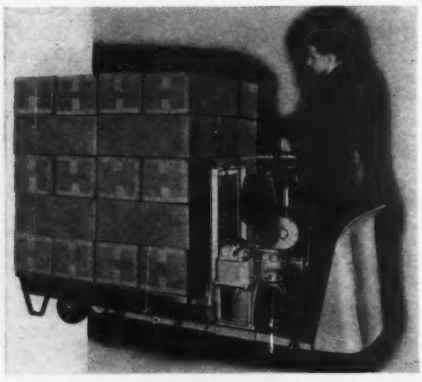
Steering has been improved by the use of a large ball thrust bearing which reduces steering effort to but a fraction of the effort formerly required.

More comfort, with accompanying lessened fatigue, greater safety and increased efficiency for the driver is achieved by a new operator's seat, which has been developed in collaboration with the safety council of the Ford Motor Company in the Willow Run Bomber plant. In addition to providing a seat with a restful, form-fitting back, it provides a support when the operator is standing and it also serves as a protective shield for added safety. The use of this new seat is particularly advantageous when women operators are employed, according to reports from users.

The operation of the Truck-Man has been made still more dependable through the use of a new, more sensitive fly-ball type governor, which replaces the old pneumatic type. It is enclosed, and is much more sensitive in action. The entire unit is sealed so the operator cannot disturb it without breaking the seal.

Other improvements include heavier load wheels with a four-inch tread and a larger gas tank of one gallon capacity which provides sufficient fuel for eight hours of normal operation. "V" type belt brakes automatically set when the machine is not in action, thus providing an added measure of safety.

The new Truck-Man has been designed to filll a highly specialized need in the more efficient handling of materials which were formerly handled by hand. With normal factory operations requiring the constant movement of loads in the under-one-ton class, the new Truck-Man is serving in virtually all modern industries, moving material faster, and thereby speeding production and lowering production costs.



MODEL D, IN OPERATION

Rules on Waste Paper Commissions

Commissions identical with those already allowed brokers on sales of wastepaper may be obtained by sales agents, the Office of Price Administration announced last week, is now in effect.

Sales agents qualifying for these commissions are defined as persons representing accumulators of wastepaper who arrange and make a sale of wastepaper to a consumer for the account, and in the name, of the accumulators.

Accumulators are defined as persons who accumulate wastepaper, in the course of, and as a result of, a manufacturing, converting, printing, publishing, merchandizing or similar operation conducted by him, or any person who accumulates wastepaper for sale with the intent of voluntarily devoting the proceeds to some public or charitable purpose, and not for the private profit of such person.

Brokerage commissions already provided range from 4 to 9% depending on the price per ton for the grade of wastepaper purchased.

This action merely places sales agents and brokers on the same basis. The accumulator cannot receive more than the ceiling price, and the extra commission for the sales agent, like that for a broker, must be separately stated on the invoice.

This action has been taken so that the existing brokerage provisions will not operate to provide sales through brokers with a higher ceiling price than that obtained on sales made through sales agents.

One organization in the business of selling wastepaper as the sales agent for various accumulators had protested against the original brokerage provision, contending that it was discriminated against. The protest was sustained by the Emergency Court of Appeals, and today's action is taken to rectify this situation.

Boston Merchants Handicapped

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 12, 1944—Merchants of fine paper, who have had difficulties in securing supplies for their customers, continue to do so. Book papers are in a serious situation. With mills shutting down in July for a week's vacation, the supply will be cut down considerably. Bristol board mills are obliged to reserve 45 per cent of their production for the Government, so that jobbers are unable to fill completely the orders of their customers. Conditions are exceedingly tight in parchment and tissues.